

CALIFORNIA
ENERGY
COMMISSION

DISTRIBUTED GENERATION: CEQA Review and Permit Streamlining

COMMITTEE REPORT

NOVEMBER 2000
P700-00-013



Gray Davis, Governor

CALIFORNIA
ENERGY
COMMISSION

DISTRIBUTED GENERATION:
CEQA Review and Permit Streamlining

COMMITTEE REPORT

NOVEMBER 2000
P100-00-013



Gray Davis, Governor

**CALIFORNIA
ENERGY
COMMISSION**

**ENERGY FACILITY
SITING &
ENVIRONMENTAL
COMMITTEE**

Robert A. Laurie,
Presiding Member
Robert Pernell,
Associate Member

Mignon Marks,
Project Manager

Roger E. Johnson,
Manager

SITING OFFICE

Bob Therkelsen,
Deputy Director

**ENERGY FACILITY
SITING &
ENVIRONMENTAL
PROTECTION
DIVISION**

Steve Larson,
Executive Director

Acknowledgements

We would like to thank the following individuals who participated in the Siting Committee proceedings and in preparing this report. The Energy Commission staff members include: Robert Cervantes, Judy Grau, Mignon Marks, Jeff Ogata, Chris Tooker, Scott Tomashefsky and Ellen Townsend-Smith. Also participating were Jeff Wilson and Richard Corey from the California Air Resources Board staff, Shirley Rivera of Resource Catalysts and Cris Cooley of Overdomain (both under contract with Onsite Energy Corporation to the Energy Commission).

We would also like to thank the following people for their supporting role in this effort: Jon Edwards of the Energy Commission staff for contract management efforts, and Evelyn Beevers, Pat Owen and Sharee Knight of the Energy Commission staff for their clerical assistance.

Individuals who attended the Siting Committee's public meetings or who provided research assistance to the Energy Commission staff include the following:

Larry Allen — San Luis Obispo County Air Pollution Control District (APCD)	Michael Montoya — Southern California Edison
Manuel Alvarez — Southern California Edison	Nino Moscolo — Southern California Edison
Janni Aragon — UC Riverside, CE-CERT	David Mandel — UC Berkeley
Peter Asmus — Pathfinder Communications	Dale Misplay — PG&E Dispersed Generation
Martin Bailey — City of Roseville	Gary Nakarado — National Renewable Energy Lab
Ron Bass — Jones and Stokes	Mohsen Nazemi — South Coast AQMD
Valerie Beck — CPUC	John Nimmons — John Nimmons and Associates
Bud Beebe — Sacramento Municipal Utility District	Mark Osterhold — Southern Energy
Kevin Best — RealEnergy	Carney Ouye — Sacramento Municipal Utility District
Warner Blumer — CPUC	Timothy Owens — City of San Diego
Justin Bradley — Silicon Manufacturing Group	Travis Pitts — California Building Standards Comm.
Jack Brunton — Sempra Energy	Winston Potts — California Air Resources Board
Kevin Bryant — City of Alameda	Bill Powers — Powers Engineering
Chuck Butler — Southern California Gas Company	Matt Puffer — Elektryon
Sheryl Carter — Natural Resources Defense Counsel	Douglas Quentin — Monterey Bay Unified APCD
Alvin Chan — Los Angeles D W P	Ed Quiroz — California Public Utilities Commission
Bill DiCapo — Livingston and Mattesich	Dave Rienhart — SMUD
Mike Dozier — California ISO	Adam Robinson — Solar Turbines
Kevin Duggan — Capstone Turbines	Dorothy Rothrock — CMTA
Troido Edwards — CPUC	Sayed Sadredin — San Joaquin Valley APCD
John Galloway — CPUC	John Sargent — National Fire Protection Association
Walter Gothbert — California Air Resources Board	Terri Shirhall — City of Roseville
Steven Greenberg — RealEnergy	Amal Sinha — City of San Jose
Pete Guisasola — City of Rocklin	Don Smith — California Public Utilities Commission
Alicia Hoover — Elmetts Communications	Eileen Smith — Solar Development Cooperative
Steve Ikkanda — City of Los Angeles	Rich Sommerville — San Diego APCD
Kurt Kammerer — San Diego Regional Energy Office	Jerry Steele — Monterey Bay Unified APCD
Jim Kenelly — Project Development	Chuck Thomas — Ventura County APCD
Chris Kinne — California EPA	Shawn Thompson — City of Irvine
Michael Lake — San Diego APCD	Bob Visas — County of Orange, Fire Authority
Kenneth Lim — Bay Area Air Quality Management District (AQMD)	Barry Wallerstein — South Coast AQMD
Travis Lund — City of Cathedral City	Brad Wetstone — CPUC
Kimberly McFarlin — Ellison and Schneider	Catherine Witherspoon — California ARB
	Leslie Witherspoon — Solar Turbines
	Eric Wong — Caterpillar

Table of Contents

ACKNOWLEDGEMENTS.....	i
TABLE OF CONTENTS.....	ii
EXECUTIVE SUMMARY	1
I. INTRODUCTION.....	10
DEFINITION OF DISTRIBUTED GENERATION	10
BACKGROUND.....	11
II. ANALYSIS OF ISSUES AND POTENTIAL SOLUTIONS	14
INTRODUCTION.....	14
A. CEQA REVIEW AND LAND-USE APPROVAL PROCESS.....	19
B. BUILDING PERMIT PROCESS.....	34
C. AIR PERMIT PROCESS.....	45
III. CONCLUSIONS.....	51
GENERAL CONCLUSIONS.....	51
SPECIFIC CONCLUSIONS.....	52
IV. RECOMMENDATIONS	55
GENERAL RECOMMENDATIONS.....	55
SPECIFIC RECOMMENDATIONS	55
APPENDIX A — SITING COMMITTEE NOTICE OF WORKSHOP WITH SCOPING QUESTIONS.....	A-1
APPENDIX B — NOTICE OF SITING COMMITTEE WORKSHOP EVALUATING DISTRIBUTED GENERATION CEQA/PERMIT STREAMLINING.....	B-1
APPENDIX C — SUMMARY OF APRIL 20 SITING COMMITTEE WORKSHOP.....	C-1
APPENDIX D — SUMMARY OF THE SEPTEMBER 7 COMMITTEE HEARING.....	D-1
APPENDIX E — LOCAL GOVERNMENT PLANNING & COMMUNITY DEVELOPMENT SURVEY.....	E-1
APPENDIX F — LOCAL GOVERNMENT BUILDING OFFICIAL SURVEY.....	F-1
APPENDIX G — LOCAL GOVERNMENT SURVEY RESPONDENTS.....	G-1

Executive Summary

On November 3, 1999, the Energy Commission opened Order Instituting Investigation 99-DIST—GEN (2) which addressed two issues regarding distributed generation: 1) interconnection standards, and 2) the need for local jurisdictions to streamline their environmental review and permitting processes. The Energy Facility Siting and Environmental Committee (Siting Committee) led both investigations.

This *Committee Report* addresses local jurisdictions' processes for environmental review and permitting of distributed generation. The Energy Commission will be asked to approve the recommendations in this report at its December 6, 2000 Business Meeting.¹

Distributed generation is the generation of electricity from facilities that are smaller than 50 megawatts (MW) in net generating capacity², which is below the Energy Commission's power plant siting jurisdiction. Similarly, the California Public Utilities Commission (CPUC) has no permitting authority over these facilities unless an investor-owned utility will own the distributed generation facility. Instead, local jurisdictions — cities, counties and air districts — conduct all environmental reviews and issue all required approvals or permits for these facilities.

The laws, regulations and policies guiding distributed generation facility siting include city and county general plans and zoning ordinances, the California Environmental Quality Act (CEQA) and CEQA Guidelines, the California Building Standards Code and local government amendments to this code, and State and local air quality laws and regulations.

In 1996, the Energy Commission hosted a roundtable discussion on distributed generation deployment issues. The roundtable attendees — including industry, utility, government and environmental representatives — formed the California Alliance for Distributed Energy Resources (CADER) and worked in committees on selected distributed generation deployment issues. CADER published a *Collaborative Report and Action Plan* which contained recommendations for resolving various deployment issues and then contacted the CPUC and others for help in implementing its *Action Plan*.

At the request of CADER, the CPUC opened an Order Instituting Rulemaking³ on distributed generation and distribution competition (e.g., competition to provide services now performed by utility distribution companies). The CPUC decided, under this rulemaking, to open a second Order Instituting Rulemaking⁴ on distributed generation issues only and to have the Energy Commission lead the investigations on CEQA and regarding interconnection standards. For the

¹ The Energy Commission approved the Siting Committee's *Recommended Rules* for interconnecting distributed generation facilities at its October 25, 2000 Business Meeting.

² The CPUC suggested that DG be defined as 20 MW or less, but 20 MW to 49.9 MW systems are subject to the same permitting processes.

³ R. 98-12-015

⁴ R. 99-10-025

CEQA issues, the CPUC asked the Commission to hold a workshop to discuss whether local government agencies can use a streamlined CEQA process for the siting of certain types of distributed generation facilities.

The Commission assigned this work to its Siting Committee when it opened its own Order Instituting Investigation⁵. For the CEQA portion of the investigation, the Siting Committee conducted a public workshop in April 2000 and the staff published the *Workshop Report on Distributed Generation: CEQA and Permit Streamlining*.⁶ The staff also surveyed local government planning directors and building officials about their experiences in performing CEQA reviews, issuing permits for distributed generation projects and their need for written guidelines or training to assist them in performing this regulatory work in a more timely manner.

The Siting Committee conducted a public hearing in September 2000 to receive feedback on the *Workshop Report* and to present findings from the staff's local government surveys. This *Committee Report* summarizes the key findings from the two public meetings, written comments, survey responses and staff research. Upon approval by the full Commission, it will be forwarded to the CPUC for inclusion in the CPUC's distributed generation proceedings.

Findings about Permits Distributed Generation Facilities May Need

Distributed generation facilities may be required to receive permits from local governing bodies (e.g., city council, county board of supervisors), as implemented by:

- 1) City or county planning departments,
- 2) City or county building departments, and
- 3) Air districts.

Whether permits are required depends on the current zoning ordinance governing the proposed project site, the distributed generation project sponsor, and the specifics of the distributed generation project, including its size and technology type.

Possible permit exemptions are as follows:

- 1) Generally, a Conditional Use Permit or zoning change is not needed if the project site is already zoned for electric generation or if the distributed generation project is deemed an accessory use at the site.
- 2) State-owned buildings and local agencies are exempt from obtaining building permits or from paying building permit fees. (Nonetheless, the project sponsor is responsible for self-enforcing all applicable sections of the California Building Standards Code.)
- 3) CPUC-regulated electric utilities are exempt from obtaining electrical permits if they own and operate the distributed generation equipment, even if it is installed on premises the utilities do not own.

⁵ OII 99-DIST—GEN (2)

⁶ Publication No. 700-00-005

- 4) Air permits are not required for distributed generation technologies which do not emit air pollution or whose emissions are below air district permitting thresholds.

Developers of distributed generation facilities may apply for all required permits at the same time, but the sequence of permit application usually follows this order:

- 1) air permits,
- 2) land-use approvals, such as conditional use permits, and
- 3) building permits.

Air permits are the first permits sought because air district requirements influence equipment selection. Once the distributed generation equipment has been selected, the land-use approval process can begin. Local governments must know what makes and models of equipment will be installed to evaluate potential significant environmental impacts (e.g., noise and aesthetics) and to specify mitigation measures. Building permits are sought last because construction plans must incorporate all project changes required by the local government planning authority to mitigate environmental impacts.

CEQA Review and Land-Use Approvals

Local governments typically conduct CEQA reviews as part of the land-use-approval process. The land-use approval process may involve a request to rezone land to allow a distributed generation facility installation. Or it may involve a request for a conditional use permit. The investigation found that conditional use permitting is likely the most common type of land-use approval sought by distributed generation facility developers.

A distributed generation project may require *both* land-use approval and an air permit. CEQA review is required if the project must have either land-use approval or an air permit. In situations where the distributed generation project requires both, the local planning department typically serves as lead agency, coordinating its environmental review with other agencies. If only an air permit is required, then the air district assumes the lead agency role under CEQA.

CEQA Guidelines include a number of classes of projects that are categorically exempt from CEQA review. For example, cogeneration projects at existing industrial, commercial, and institutional facilities are categorically exempt from CEQA, if they meet specific air quality, noise abatement, and other criteria.

The Energy Commission staff proposed expanding this CEQA exemption to other types of distributed generation equipment that is capable of meeting the same air, noise, and other criteria. Air-district representatives recommended against exempting diesel engines, however, due to both the direct and cumulative impacts of their nitrogen oxide (NOx) and toxic pollutant emissions.

California has already instituted a number of guidelines and programs to streamline CEQA and local government permitting processes. For example, the State's Permit Streamlining Act imposes the following time limits, once a permit application is accepted as complete:

- 1) One year for Environmental Impact Reports,
- 2) Six months for Negative Declarations or Mitigated Negative Declarations

Local governments would require a lengthy environmental review (i.e., preparation of an Environmental Impact Report) only when the project may cause significant environmental effects that cannot be avoided or mitigated.

Possible Building Permits Required

Building permits are required for distributed generation projects including an equipment replacement, addition in an existing building, or a component of a new building. These permits are issued after city or county building departments have determined that 1) the permit package is complete, 2) the project complies with all applicable building codes, and 3) the project has received all other required approvals (e.g., conditional use permits and air district permits). During construction, the building department staff conducts field inspections to ensure that the project follows the approved plan.

The building permit process is not subject to CEQA review or the time limits imposed by the Permit Streamlining Act. A key variable in building-permit timing is the type of construction: equipment replacements can be approved relatively quickly, whereas the construction of a new high-rise building with on-site electric generators take much longer because the projects are more complex and do not have existing electrical plans.

Local jurisdictions enforce the California Building Standards Code, which embodies the California Building, Electrical, Mechanical, Plumbing and Fire Codes. Because of local amendments, these codes may differ among jurisdictions. Building officials in the Bay Area, Los Angeles and San Diego, however, are working to reduce the number of local amendments so that building code enforcement is uniform regionally.

Emergency generators are familiar types of distributed generation. They are common because the California Building Standards Code requires emergency or stand-by power in specific classes of residential, commercial, industrial, and institutional buildings. Battery systems may supply emergency power to small electrical loads, such as exit lighting, but larger electrical loads need emergency generators.

The California Electrical Code requires that emergency generators have an on-site fuel supply capable of powering emergency electrical loads for a specific number of hours. Natural gas supplied by the local gas utility is *not* an acceptable fuel source because deliveries may be interrupted during emergencies, such as earthquakes. As a result, emergency generators are typically diesel fueled. The California Electrical Code's requirements for on-site-fuel supply

may conflict with future California Air Resources Board (CARB) efforts to set emission standards for distributed generation facilities, if the standards are achievable only by using natural gas.

Possible Air Permits Required

Distributed generation facilities that burn fuel may be required to obtain air permits if equipment size or total projected emissions will exceed thresholds set by the air district. Air permitting requirements vary throughout California due to regional differences in air quality. Air districts in regions designated as non-attainment under the federal and California Clean Air Acts may require distributed generation projects to install Best Available Control Technology and to offset their emissions of criteria pollutants. Determinations of Best Available Control Technology and effort to secure offsets can delay the air permitting process, which is typically a three-month process.

Air districts are concerned about the proliferation of fossil-fueled distributed generation because of the potential impacts on regional air quality and public health, which are not already addressed in air quality attainment plans. Distributed generation emission rates are much higher than those of large central station power plants, and their emissions are usually released near to or at ground level, resulting in greater local impacts on ambient air quality conditions. Also, distributed generation equipment is most economical to use during periods of summer time peak-electric demand, when local air quality conditions are at their worst.

The use of emergency diesel generators in these circumstances is especially problematic because they emit both high levels of NO_x and toxic pollutants. Such emissions, therefore, potentially exacerbate ozone problems and increase cancer risk in a community, especially if diesel generators are deployed in greater numbers and used in other than emergency back-up modes.

Air district and distributed generation equipment representatives agree that establishing uniform emission standards and certification programs for distributed generation equipment would help to streamline air permitting. Equipment manufacturers, however, did not want emission standards set as low as Best Available Control Technology for central station power plants because emission controls are very costly for small-scale electrical generation.

A new law, Chapter 741 of the Statutes of 2000 (formerly SB 1298) requires the CARB to issue permitting or certification guidance to air districts on the generation technologies subject to air district permitting requirements. It also requires the CARB to adopt uniform emission standards which reflect best performance achieved in practice for distributed generation equipment that is exempt from air district permitting requirements. Once certification programs are in place statewide, *all* distributed generation equipment must be certified or permitted before use or operation.

Some districts exempt emergency generators from installing emission controls because their operations are limited (e.g., <200 hours per year) to periods of power outages. This summer, a

few air districts observed some emergency diesel generators were operating before a power outage. This was in violation of their permit exemption. The California Electric Code, however, allows peak-shaving operations to count as the required performance testing. Owners of these generators claimed they were testing their generators coincident with California Independent System Operator requests to reduce peak electric demand.

The California Independent System Operator and air districts are now working together to better understand each other's needs and program operating criteria. Some local jurisdictions are being asked to permit new or enlarged emergency diesel generators, to provide critical peak electricity to help prevent electricity outages for the next two to three years until new central station power plants come on line.

Conclusions

The CPUC's *Order Instituting Rulemaking into Distributed Generation*⁷ stated that if certain types of distributed generation equipment have no environmental impacts at all, the Legislature may want to consider exempting them from CEQA. The Siting Committee found that distributed generation equipment with no environmental impacts is already exempt from CEQA review. No further legislative action is needed.

The CPUC's *Order* also questioned whether proposals to install many of the same type of distributed generation equipment may qualify for some type of streamlined CEQA review at the local government level. This investigation determined that local governments can streamline the CEQA review of multiple distributed generation proposals which would use similar equipment by preparing a program or a master Environmental Impact Report for these projects, rather than preparing an Environmental Impact Report for each project.

The CPUC's question above, however, implies that local governments are requiring an Environmental Impact Report for each distributed generation project. The Siting Committee was unable to locate an example of a local jurisdiction preparing a full Environmental Impact Report for a stand-alone distributed generation project. Instead, most local governments reported no experience in preparing any environmental documents for distributed generation projects. And those that had conducted some type of CEQA review reported preparing only negative declarations or mitigated negative declarations. Concerns expressed by industry representatives about potentially lengthy CEQA reviews appear to be unfounded at this time.

This investigation revealed that concerns about the CEQA review and permitting processes are not new or unique to distributed generation. A number of State and local government programs are already in place to facilitate environmental review and permitting in California. These programs include the following:

⁷ R. 99-10-025, page 17

- The California Trade and Commerce Agency's Office of Permit Assistance helps local governments to improve their permit processes, including CEQA streamlining.
- The Permit Assistance Centers of the California Environmental Protection Agency offer businesses one stop referral services to help identify all required permits.
- Local government building officials in three major metropolitan areas are working together to eliminate differences between their building codes.

In addition, many activities are underway to facilitate distributed generation permitting specifically, including the following:

- Technical societies are updating equipment testing and certification procedures, and building codes so that they include new distributed generation technologies, including photovoltaic systems and fuel cells.
- Under a new law, the CARB is establishing emission standards and certification programs for permit-exempt distributed generation equipment, and guidance to air districts on emission standards and certification programs for non-exempt equipment.
- The Urban Consortium Energy Task Force is conducting research on the role of distributed generation in municipal government. This research includes analyses of issues about environmental permitting and building codes, which may be impacting distributed generation deployment⁸.

Future actions to facilitate distributed generation deployment should recognize these existing programs and seek to fill gaps, where they exist.

Recommendations

Unlike the Energy Commission's *Recommended Rules*⁹ for interconnecting distributed generation facilities to the grid, this *Committee Report*'s recommendations for CEQA review and permit streamlining cannot be implemented by the CPUC through utility tariff language. Except for a recommendation to amend CEQA Guidelines, the recommended strategies involve initiating new technical assistance and training programs for the staff of local jurisdictions who evaluate permit requests for distributed generation projects.

The Siting Committee has seven recommendations regarding how to assist local jurisdictions. Some recommendations are expressed as possible future activities by the Energy Commission staff. These recommendations, however, could be implemented with assistance from other State agencies, such as the CPUC.

⁸ *The Role of Distributed Generation in Municipal Government, Draft Workshop Report* for a workshop held on October 2-3, 2000, prepared for National Renewable Energy Laboratory under Task Order Number KDC-9-29401-10, prepared by Energetics, Inc., October, 2000.

⁹ See final version of Energy Commission Publication No. 700-00-008.

Recommended State Actions to Streamline CEQA Review and Land-Use Permitting

- 1) The Siting Committee recommends that the Energy Commission assign the staff to provide technical assistance, if needed, to local jurisdictions conducting CEQA review and land-use approval for the peaker projects, which were proposed in response to the California Independent System Operator's Summer Generation 2001 Request for Bids.
- 2) The CEQA Guidelines should be amended to expand the categorical exemption, which currently exists only for cogeneration projects at existing facilities, to all types of distributed generation technologies that meet the same eligibility criteria. This amendment, however, should not include a categorical exemption for diesel-fueled generators.
- 3) The Siting Committee recommends that the Energy Commission direct the staff to work with local government planning departments to develop the following:
 - Lists of distributed generation projects that are exempt from CEQA and land-use approval;
 - Thresholds of significance in key environmental issue areas, including air quality, noise, and aesthetics; and
 - Standard mitigation measures for the types of distributed generation technologies which have the potential to cause significant environmental impacts in key environmental subject areas, including air quality, noise and aesthetics.

Recommended State Action to Streamline Air Permitting

- 4) The Siting Committee recommends that the Energy Commission assign the staff and commit contract dollars, if needed, to assist the CARB in planning the new distributed generation emission standards and certification program.

Recommended State Action to Streamline Building Permitting

- 5) The Siting Committee recommends that the Energy Commission assign the staff to provide training and technical assistance services to city and county building department staffs to facilitate plan checks and field inspections of new types of distributed generation technology, such as photovoltaics, microturbines, and fuel cells.

Recommended Local Jurisdiction Actions to Streamline the CEQA Review Process

- 6) Local governments can streamline the CEQA review process for *individual* distributed generation projects by updating their zoning ordinances to clarify where distributed generation projects (distinguished by technology type) are allowed, allowed with a conditional use permit, or prohibited.

For distributed generation projects which require conditional use permits, the local government could facilitate project approval by providing direction to distributed generation project developers regarding thresholds of significance and standard mitigation measures for issues such as air quality, noise abatement and aesthetics.

These two actions would enable distributed generation project developers to know in advance:

- where the local jurisdiction generally allows distributed generation projects; and
 - what mitigation measures should be included in their project plans.
- 7) Local governments can streamline the CEQA review of *multiple* distributed generation projects that would normally require Environmental Impact Reports by preparing a program Environmental Impact Report or the master Environmental Impact Report to address the environmental impacts of these projects.

I. INTRODUCTION

The Siting Committee is pleased to submit this report to the Energy Commission pursuant to Order Instituting Investigation OII 99-DIST-GEN(2), which the Energy Commission issued on November 3, 1999. The OII addressed two perceived barriers to deploying DG facilities in California: lack of uniform interconnection standards and delays in local CEQA review and permitting processes. This report addresses the second element of the OII, that is, whether local jurisdictions can use a streamlined process to conduct CEQA reviews and to permit DG facilities.

This report gives the history of OII discussions on the record about CEQA-review process streamlining and three permitting processes affecting DG facilities: land-use permitting, building permitting, and, air quality permitting. Upon approval by the full Energy Commission, this report will be submitted to the CPUC and interested parties.

Although the CPUC's original request was for the Energy Commission to address issues associated only with CEQA streamlining, the Siting Committee expanded the inquiry beyond CEQA to also cover land-use permits, building permits and air permits. The Siting Committee expanded the scope because CEQA review is performed as an integral part of the land-use and/or air pollution permitting processes. Also, the Siting Committee received comments during its public workshop about how the building permit process, although not subject to CEQA review, posed barriers to DG facility deployment in some local jurisdictions.

DEFINITION OF DISTRIBUTED GENERATION

DG refers to stationary applications of electric generating technologies which are smaller than 50 MW of net generating capacity, the Energy Commission's power plant siting jurisdiction threshold. They may be owned by electric or gas utilities, by industrial, commercial, institutional or residential energy consumers, or by independent energy producers. They include generating technologies such as diesel engines, fuel cells, small and micro gas turbines, solar PV, and wind turbines, and may be combined with electric storage technologies such as batteries and flywheels.

DG applications, which are familiar to local jurisdiction permitting authorities, include the following:

- Emergency and stand-by generators and battery systems installed in commercial and institutional buildings to supply back-up electric power for critical loads in the event of a power outage by the local electric utility.
- Cogeneration and renewable energy systems (e.g., solar, wind, small hydro-electric and biomass facilities) installed to augment utility power supplies year round and, if grid-connected, to sell power.
- DG to serve remote or off-grid electric loads.

New applications of DG are also appearing, including the following:

- Uninterruptible power supply systems to ensure that sensitive electronic equipment receives premium quality electricity.
- DG facilities located at strategic locations along the transmission system, providing peaking power, voltage and frequency support to grid operators.
- DG facilities, that enable electric customers to respond to electric price signals by switching to an on-site power source.

BACKGROUND

In 1996, the Energy Commission sponsored a Distributed Generation Roundtable to identify barriers to DG deployment and help form the California Alliance for Distributed Energy Resources (CADER), a collaborative of equipment manufacturers, utilities, government agencies and others interested in promoting DG. For the next year, CADER members worked on various issues through committees, including its Siting and Environmental Committee. The CADER Siting and Environmental Committee researched the need for timely and efficient permitting of DG projects by local governments and air districts. The Committee's immediate concern was that lengthy and uncertain permitting processes could add costs, which would make DG projects uneconomical. It was also concerned that local agencies may not be able to handle a significant increase in proposals to install DG projects given their general lack of familiarity with DG applications.

The CADER *Collaborative Report and Action Plan* contains the Siting and Environmental Committee's findings about the siting and environmental barriers to DG development, including:

- limited governmental policy support,
- lack of general information, specific technical information, and universally accepted standards,
- unconsolidated, ambiguous information on siting and permitting requirements,
- the omission of DG from long-range energy infrastructure plans, and
- inconsistent regulatory standards and absence of pre-certification procedures.

The October 1999 CPUC adoption of Decision D. 99-10-065 and a companion Order Instituting Rulemaking (OIR) 99-10-025 provided a procedural roadmap for addressing issues related to DG. The decision was the result of collaborative efforts among the CPUC, Energy Commission, and Electricity Oversight Board. Section K of the OIR asked the Energy Commission to hold a workshop to discuss whether local government agencies can use a streamlined California Environmental Quality Act (CEQA) process for the siting of certain types of DG facilities. The OIR noted that if the equipment has no environmental impacts at all, the Legislature may want to consider exempting certain DG types from CEQA (i.e., a statutory exemption). In other instances, local governments may see numerous proposals to install the same or similar types of DG equipment that do have environmental impacts. In such cases, the OIR suggested that the

siting of DG of the same type may qualify for some form of streamlined CEQA review at the local government level.¹⁰

In response to the CPUC request, the Energy Commission opened an investigation OII 99-DIST-GEN (2) to consider whether local government agencies can use a streamlined process to address CEQA issues in reviewing DG facilities. Under this order, the Commission's Energy Facility Siting and Environmental (Siting) Committee was designated as the lead for this work. In addition to meeting the needs of the CPUC's OIR, the Siting Committee's investigation also considered the feasibility of, and need for, local land-use permit, building permit, and air permit streamlining.

The Siting Committee conducted two public meetings and two local government surveys to solicit public comments about DG-related CEQA and permitting issues. Below is a summary of these activities.

Siting Committee Workshop

The first public meeting was a Committee workshop on April 20, 2000. The Energy Commission staff worked with the CARB staff and Shirley Rivera of Resource Catalysts to prepare the April 4, 2000, Notice of Siting Committee Workshop Evaluating Distributed Generation CEQA/Permit Streamlining and its attached scoping questions (See Appendix A).

The Energy Commission staff sought to include local agencies in the workshop process. In addition to inviting approximately 140 parties on the CPUC R.99-10-025 service list, the staff distributed the workshop notice, along with a cover memo explaining the workshop notice and its potential relevance to their work (see Appendix B), to about 1,200 State of California and local governmental entities.

To maximize the ability of interested parties to participate in the April 20 workshop, the meeting was broadcast over the Internet. The comment period was extended through May 5, 2000 to receive additional written comments related to the scoping questions and workshop discussions.¹¹

Appendix C provides summaries of all presentations and comments received during the workshop proceedings.

¹⁰ CPUC D.99-10-065 (p. 18) noted that many small distributed generators are not covered by existing air quality regulations. However, the deployment of some DG technologies, such as diesel-fired generators and natural gas-fired gas turbines, may have adverse environmental impacts, especially with respect to air quality, depending on the location, type, size, and number of DG units deployed. Siting a large number of such fossil-fueled generators in the same general vicinity could have a significant adverse impact on air quality which was not contemplated by an air district in the development of its air quality attainment plan.

¹¹ No additional comments were received during the two-week extension period.

Workshop Report

In June 2000, the Commission staff reviewed the workshop materials and written comments to identify the key issues, potential solutions for an expedited CEQA review and local jurisdiction permitting, and published a *Workshop Report*, which contained summaries of this information. In addition, the *Workshop Report* included background information about the CEQA review process and the three permitting processes.

Copies of the *Workshop Report* were mailed to the CPUC, everyone who attended the workshop, all who are participating in the CPUC's DG proceeding, and local jurisdictions, including the following:

- pollution control officers, planning managers and permit engineers for each California air district, and
- planning/community development directors and the chief building officials of all California cities and counties.

It was also posted in the Energy Commission's Web Site.

Local Government Surveys

The *Workshop Report* mailings to cities and counties included a survey to collect feedback about current DG permitting activities and local government interest in receiving technical assistance or training to facilitate DG permitting in the future. Different surveys were sent to city and county planning directors and to city and county building officials. As of October 17, 2000, 143 local jurisdictions have responded.¹² Appendices E and F provide the survey instruments. Appendix G provides the names of all local jurisdictions, which completed one or both surveys.

Siting Committee Hearing

On September 7, 2000, the Siting Committee held a hearing to allow public comment on the Workshop Report. In addition to a staff-prepared summary of the Workshop Report's contents, Dorothy Rothrock of the California Manufacturers and Technology Association presented information on the new law to establish emission standards for DG equipment. Following these presentations, the Committee heard comments from representatives of the CARB, air districts, renewable energy advocates, DG consultants, local government, and large energy consumers.

Appendix D provides summaries of the presentations and comments received during the hearing proceedings.

¹² Respondents included 4 towns, 18 counties and 121 cities.

II. ANALYSIS OF ISSUES AND POTENTIAL SOLUTIONS

INTRODUCTION

This chapter highlights key information from discussions to date about: (1) CEQA review/land-use permit process, (2) building permit process, and (3) air permit process. These categories frame the Siting Committee's investigation regarding DG-related CEQA review and permitting issues. For each category, this chapter provides a table of key issues, potential solutions and a rationale for why the potential solution would resolve the particular issue.

CEQA Review and Land-Use Permitting Process

The State's Resources Agency compiled the following short description about the purpose and scope of CEQA:

CEQA is a State statute that requires State and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. State and local public agencies must comply with CEQA when undertaking an activity defined by CEQA as a "project."

A project is an activity undertaken by a public agency or a private activity, which must receive some discretionary approval from a government agency, and which may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment. Discretionary approval means that the agency has the authority to deny the requested permit or approval. Every development project, which requires a discretionary governmental approval, will require at least some environmental review pursuant to CEQA, unless an exemption applies.

If a local government must make a discretionary decision to allow DG equipment to be installed on land or in buildings regulated by its zoning ordinances, then a CEQA review must be performed. Typically, the discretionary decision will be approval of a conditional use permit, but the decision could be a zoning change instead. Participants in the Siting Committee's proceedings raised a number of issues about the CEQA review and land-use permitting processes, including the following.

Local government land-use policies and zoning ordinances may not include electric generating facilities in their land-use definitions or indicate in which zones DG facilities are allowed or prohibited. The public may object to the proposed project if it will be polluting, noisy or unsightly. The local government planning department staff, who must evaluate project information to support the decision to allow the project at a particular site, may be unfamiliar with DG technologies, not know how to evaluate its potential environmental impacts, or know

what mitigation measures¹³ would be appropriate. To obtain project approval, the developer may have to educate the local planning department staff by responding to multiple information requests. Table 1 includes potential solutions regarding these concerns.

Building Permitting Process

Most new construction and remodeling projects require a building permit from the local government building department. Building departments enforce the California Building Standards Code. Some of the issues raised about the building-permit process included that:

- the building codes may differ from jurisdiction to jurisdiction,
- the building codes may not cover new DG technologies,
- the local government building department staff, who must evaluate project information to support the decision to allow the project at a particular site, may be unfamiliar with the DG technology, not know how to apply or interpret the code relative to the specific DG project.

To obtain project approval, the developer may have to educate the local government staff which checks building permit applications and construction plans (plan checkers) by responding to multiple information requests. Table 2 includes potential solutions, including providing the local government building department staff with information on DG technologies.

Air Permitting Process

DG equipment running on fossil fuels or biomass fuels emit air pollutants that may create environmental impacts and public health concerns. The local air district may require DG facility developers to obtain air pollution permits. Air district requirements for emission controls may differ between air districts. Air districts are concerned about potential cumulative impacts of multiple DG projects, particularly if the equipment uses diesel fuel. Equipment manufacturers would prefer uniform emission standards so that equipment can be mass manufactured, rather than customized for different regions. Table 3 includes suggestions for uniform emission standards and pre-certification programs for DG equipment that meets the standards.

¹³ Mitigation measures are project changes to reduce a project's significant environmental impacts

Table 1: CEQA Review/Land-Use Permitting Issues and Potential Solutions

Issues / Problems	Potential Solutions	Rationale
<p>CEQA Applicability</p> <p>It is necessary to clarify the definition of use to determine when CEQA review and land-use permits apply.</p> <p>Relatively environmentally benign DG technologies and projects may undergo unnecessarily lengthy CEQA review and use permitting.</p> <p>Insufficient information is provided by the developer for agencies to determine CEQA applicability.</p>	<p>Provide guidance/legal interpretation of types of projects that would not be exempt from CEQA and that would require, at the very least, a negative declaration.</p> <p>Create/legislate a categorical exemption from CEQA for certain DG technologies.</p> <p>Develop a template for agencies to conduct their environmental impacts evaluation of a DG project</p>	<p>Consistent agency interpretation of CEQA applicability provides certainty for DG project developers to minimize project delays.</p> <p>Encourages lower and non-emitting DG technologies where CEQA review may be relatively minimal.</p> <p>Developers can provide sufficient information to agencies based on the agencies template for project evaluation.</p>
<p>DG Technology</p> <p>Local planners and regulatory agencies do not have sufficient information to readily evaluate a project under CEQA and issue the necessary approvals.</p> <p>Local communities may not want a DG project near them.</p> <p>Local communities may raise the issue of environmental justice.</p>	<p>Develop a DG technologies and environmental profiles database for agencies to conduct their review and identify possible mitigation measures and other conditions of approval.</p> <p>Initiate discussion of the community's issues early on in project development.</p> <p>Initiate and conduct coherent communication among project developers, the public and agencies.</p>	<p>Technology specific information provides the starting point for agency and public evaluation of environmental impacts and mitigation measures, where applicable.</p> <p>Avoids need for damage control during the public review process.</p>
<p>Specific Agency Standards and Policies</p> <p>Current local land use policies and zoning may not readily allow DG.</p> <p>The review process and applicable standards differ from region to region.</p> <p>There are multiple agencies involved in DG project approval; agencies requirements may compete or conflict.</p> <p>It is unclear whether and how cumulative impacts may be addressed.</p>	<p>Inform local elected officials about DG and encourage DG's recognition in general plans, etc.</p> <p>Create standards for specific technology groups.</p> <p>Provide/use a consolidated set of siting requirements and involved agencies.</p>	<p>Land use planning that accommodates DG project development minimizes the need for amending plans, the need for undergoing additional CEQA review and the lengthy approval procedures.</p> <p>Technology specific standards will minimize developers guesswork for approvable projects.</p> <p>Guidance for approval process will facilitate the introduction of DG technologies so vendors can design equipment that meet the standards.</p>

Table 2: Building Permitting Issues and Potential Solutions

Issues / Problems	Potential Solutions	Rationale
<p>DG Technology Knowledge</p> <p>The local building department staff may be unfamiliar with a DG technology. DG developer must spend time educating the front desk staff.</p> <p>Building department field inspectors are not familiar with inspection protocols for certain technologies.</p>	<p>Develop a standardized building permit submittal application package (e.g., PV systems). Use California-registered professional engineer to review plans.</p> <p>Provide targeted training for field inspectors. Present new technology using agency's terms and interests: how system meets codes, fire ratings, etc.</p>	<p>Standardized application packages for DG technologies provides certainty regarding the necessary technology and project parameters.</p> <p>Training for inspectors will minimize delays in project approvals.</p>
<p>Siting Requirements and Agency Procedures</p> <p>There is not a comprehensive resource(s) for identifying permits and approvals that must be secured for DG project development.</p> <p>Existing California Environmental Protection Agency (CalEPA) Web Site (CalGOLD) offers permit assistance to many types of businesses but does not have a business type for DG. So project developers cannot use this reference. The Cal-EPA Permit Assistance Centers provide similar information through face-to-face meetings with project developers.</p>	<p>Publish a Guidebook for building permit departments (the regulatory staff) on approving permits to readily deploy DG technologies.</p> <p>Develop specific guidance document/tool/resource for developers to identify necessary agency approvals, applicable regulations, and processing fees.</p> <p>Compile/develop a best practices list as it relates to licensing various DG projects:</p> <ul style="list-style-type: none"> - Has any similar project been through the same processes? - What timeframes did they experience? <p>Work with CalEPA's CalGOLD Web Site providers or Permit Assistance Centers to disseminate information to DG developers on permitting requirements.</p>	<p>Help agencies develop/conduct their own DG approval processes more efficiently.</p> <p>Enable DG project developers to spend less time and expense obtaining approvals.</p> <p>Set the proper expectations about the time and effort that will be required to obtain approvals.</p> <p>The existing CalEPA services may provide services to DG project developers.</p>
<p>DG Specific Agency Standards and Policies</p> <p>Local codes may not address DG technologies.</p> <p>Applicable standards, such as fire codes, differ from region to region.</p>	<p>Extend building codes to cover energy use of DG, encouraging combined heat and power applications.</p> <p>Modify building codes for optimizing sizing and installation standards.</p> <p>Create standards for specific technology groups.</p> <p>Have a nationally recognized testing laboratory, such as Underwriters Lab, test DG for certification. Design for plug and play.</p>	<p>Technology specific standards will minimize developers guesswork for approvable projects.</p> <p>Specific standards and policies for DG technologies will allow vendors to design equipment that meet the standards.</p>

Table 3: Air Permitting Issues and Potential Solutions

Issues / Problems	Potential Solutions	Rationale
<p>DG Specific Agency Standards and Policies</p> <p>Air quality control technology requirements do not account for energy benefits, e.g., fuel efficiency.</p> <p>Emission standards and control requirements differ from region to region.</p> <p>Manufacturers must make different products to sell in different parts of California or have limited markets.</p>	<p>Use output-based emission standards, e.g., lb/MW-hr, develop uniform, well-defined BACT standards.</p> <p>Create uniform environmental performance standards for fossil fuel-fired technologies.</p> <p>Develop pre-certification program for DG units for permit streamlining or exemptions.</p> <p>Develop an accelerated permitting program for low-emitting DG technologies and applications.</p>	<p>Combined heat and power recognized for efficiencies.</p> <p>Uniform, output based emission standards provides incentive for efficient technologies and pollution prevention goals.</p> <p>Applicant obtains accelerated or over-the-counter permit without an air district CEQA review.</p> <p>Provides certainty of air district emission standards and process.</p> <p>DG products at appliance level are candidates for precertification based on emission test results (e.g., similar to natural gas space and water heaters).</p> <p>Exempt DG can avoid air permit paper work and delays.</p>
<p>Regional Emissions Impact</p> <p>Fossil fuel-fired units emit air pollutants that have environmental and public health impacts</p> <p>DG stacks have near-ground impacts and are likely to be near populated areas, e.g., near load centers, versus remote central power plant impacts</p> <p>Cumulative impacts from multiple DG units may delay district attainment.</p>	<p>Fossil fuel-fired DG units that are not exempt from permits must be evaluated for BACT.</p> <p>Fund advanced DG technologies with progressively low emissions, e.g., natural gas fired spark ignition engines, DOE program on advanced gas reciprocating engines.</p> <p>Air pollution prevention program targeted toward DG explicitly addressing environmental performance of DG technologies.</p> <p>Address aggregate impacts in attainment planning and account for energy benefits.</p>	<p>Advanced DG technologies could compete with larger natural gas-fired combined cycle plants.</p> <p>Attainment planning, which incorporates potential growth of DG industry could minimize stifling of DG unit deployment.</p>
<p>Diesel Engine Operation and Emissions</p> <p>Exhaust from engines contains air toxic emissions.</p> <p>Standby engines are likely peak shaving units running on peak days, e.g., hottest, smoggiest days of the year.</p> <p>Some emergency engines have minimal to no controls.</p>	<p>Develop permit requirements for new and existing non-emergency diesel engines; this includes particulate controls to minimize air toxic impacts.</p> <p>Develop criteria for engines serving peak needs to avoid power brown outs.</p>	<p>Creates market for new generators that use natural gas as well as add-on and retrofit controls.</p> <p>Peak shaving minimizes energy costs and the upgrade of distribution lines.</p>

A. CEQA REVIEW AND LAND-USE APPROVAL PROCESS

This section first describes the CEQA review and land-use permitting as two separate processes and then shows how they combine into one procedure at the local level. Using this understanding of the processes, this section then addresses the following key questions:

- Can certain types of DG qualify for exemption from CEQA review?
- Can certain types of DG qualify for some form of streamlined CEQA review?
- How can the building permit and the air permit processes be facilitated for DG?
- Can certain types of DG qualify for exemption from either building or air permits?

The CPUC decision¹⁴ stated that the intent of the permit streamlining investigation was not to change who has authority over the siting and operation of DG facilities, whether that authority is the municipality, the county, or the local air district. Furthermore, the Siting Committee stated at its workshop that streamlining efforts will not attempt to shorten the time limits already imposed on local jurisdictions permitting processes by the CEQA Guidelines and the California Permit Streamlining Act. For purposes of this analysis, streamlining means to help local agencies conduct their permitting processes more efficiently and expeditiously.

CEQA Review Process Description

The most basic steps of the environmental review process are the following:

- 1) Determine if the activity is defined as a project subject to CEQA.
- 2) Determine if the project is exempt from CEQA.
- 3) Perform an initial study to identify the environmental impacts of the project and determine whether the identified impacts are defined as significant.

Based on its findings of significance, the agency prepares one of the following environmental review documents:

- 1) Negative Declaration if it finds no significant impacts,
- 2) Mitigated Negative Declaration if it finds significant impacts, but the developer revises the project to avoid or mitigate those impacts, or
- 3) Environmental Impact Report (EIR) if it finds significant unmitigated impacts.

Before making a decision on a project, the agency must certify that the environment document is adequate and complete. Based on the finding in the approved environmental document, the public agency then decides whether to approve the project.

If a city or county conducts an initial study on a proposed DG project and determines that it will have no significant environmental impact, it then can prepare a negative declaration. If the initial study reveals that a project could potentially create a significant environment impact, but the

¹⁴ Decision 99-10-065, p. 56

project developer agrees to revise the project so that the significant impacts can be avoided or reduced to insignificance, then the local jurisdiction can prepare a mitigated negative declaration.

Project changes and mitigation measures must be agreed to or made by the project developer *before* the draft negative declaration is circulated for public review and comment. Some jurisdictions require the developer to sign the draft mitigated negative declaration, indicating agreement with the mitigation measures or project revisions, before circulating the document.

A key question for the local jurisdiction is: what level of mitigation or project revision is sufficient to avoid or eliminate a potential significant effect? There is no ironclad answer which would apply in every instance; the local jurisdiction must use its own independent and objective judgment. Mitigation measures must be adopted as conditions of approval. The local jurisdiction must also adopt a mitigation monitoring or reporting program to ensure compliance with the required mitigation measures or project revisions during project implementation.

Land-Use Development Approval Process

Cities and counties adopt community standards in the form of zoning ordinances to promote the safety, welfare, and orderly development of their jurisdiction. The construction of any building, as well as the occupancy or use of that building, must be designed and constructed to meet these community standards. These standards vary depending on what is proposed and where the building is located. Basic questions involved in the project review process include the following:

- 1) Is the use consistent with the General Plan?¹⁵
- 2) Is the use allowed in the zoning classification?¹⁶

Applicants seeking approval of proposed projects may be required to apply for various discretionary entitlements¹⁷ if the proposed project does not comply with the local jurisdiction's approved General Plan and zoning ordinances.

Amendments to the General Plan require a public hearing and the local jurisdiction's approval. If a landowner proposes a use that is not currently allowed by zoning, a change of zone or a conditional use permit must be obtained by the project developer. A conditional use permit or rezoning requires a public hearing and local jurisdiction approval.

¹⁵ A General Plan is the local jurisdiction's blueprint for future development. It describes the development goals and policies and forms the basis for land use decisions. In addition to goals and policies, the General Plan also contains a land use diagram (map) which designates land areas for specific uses. Examples of typical land-use categories include residential (various densities), commercial and office, commercial and warehousing, and industrial.

¹⁶ Zoning districts are established to promote compatible patterns of land use within a zoning jurisdiction and establish appropriate site development regulations and performance standards. Zoning maps assign each piece of property to a "zone" which specifies how the land may be used. The zoning clearances establish uses allowed in each zone and standards that must be met within each zone.

¹⁷ Discretionary entitlements include rezoning approvals or conditional use permits.

Local government zoning ordinances identify allowed uses within each, specific zoning district. The Energy Commission surveyed city and county planning departments to determine in which zoning districts DG is allowed. The survey results showed that the term distributed generation is not recognized in any zoning ordinance, but approximately half of all jurisdictions define electric power generation (using different terminology) as a potential use in some zoning districts. A third of survey respondents define DG as public utility facilities regardless of facility ownership by an electric utility. The remaining jurisdictions define DG as electric generating plants, by type (e.g., co-generation) or other definition (e.g., specialized industrial).

Within each zoning district, electric generation may be the following:

- Allowed, explicitly,
- Allowed with a conditional use permit,
- Prohibited, explicitly, or
- Not identified (i.e., the zoning ordinance is silent).

The survey results indicated that when electric generation is not identified as an allowed or a prohibited use, the local jurisdiction will typically require the project to apply for a conditional use permit.

The conditional use permit application process includes a review of the project's proposed location, design, configuration of improvements, and potential impact on the surrounding area that are based on established standards. The local jurisdiction notifies all nearby property owners and tenants, and its designated planning body conducts a hearing. The review determines whether the proposed use should be permitted by weighing the public need for, and benefit to be derived from, the project against any adverse impact it may cause.

The process for obtaining land-use approvals always involves some level of environmental review and follows the steps in Table 4 below.

Table 4: Land-Use Permitting and CEQA Review Process

Step	Land-Use Permitting/CEQA Review Actions
1	Informal Consultation/Preliminary Review (Optional elsewhere)
2	Application submitted
3	Agency conducts Initial Study
4	Project information distributed to appropriate agencies and neighborhood groups for their review and comment
5	Project reviewed by the planning staff
6	Determine which environmental document to prepare (Notice of Exemption, Negative or Mitigated Negative Declaration, Environmental Impact Report)
7	Planner receives comments and schedules any necessary follow-up meetings
8	Environmental review completed
9	Planner schedules project for appropriate public hearing
10	Public Notices mailed to surrounding property owners
11	Planner prepares the staff report
12	Project is heard at the public hearing held by the Planning Commission (or Zoning Administrator)
13	Appeal Period (10 days)
14	If required, project is heard at a public hearing held by the City Council (or Planning Commission) or County Board of Supervisors

Local governments are obligated, under the California Permit Streamlining Act¹⁸ to complete their environmental review and to provide a land-use decision within strict time limits.

Section 15102 of the California Code of Regulations (CCR) states, [t]he Lead Agency must determine within 30 days after accepting an application as complete whether it intends to prepare an EIR or a negative declaration.

Section 65950 of the California Government Code states the following:

[a]ny public agency which is the lead agency for a development project for which an environmental impact report is prepared shall approve or disapprove the project within **one year** (emphasis added) from the date on which an application

¹⁸ California Government Code (CGC) Sections 65920 et seq. and under Article 8, Time Limits of the CEQA Guidelines (California Code of Regulations (CCR) Title 14, Sections 15100 to 15112.

requesting approval of the project has been received and accepted as complete by that agency. If a negative declaration is adopted or if the project is exempt, the development project shall be approved or disapproved within *six months* (emphasis added) from the date on which an application requesting approval of the project has been received and accepted as being complete by that agency, unless the project proponent requests an extension of the time limit.

Once the public agency accepts a project application as complete, the time limits imposed for preparing the environmental documents and reaching a decision are the same: six months for negative declaration-type projects and one year for EIR-type projects.

CEQA Applicability to Distributed Generation Projects

During the workshop, Commissioner Laurie posed the following question: At what point does the operation of a piece of DG equipment become a land use issue, as opposed to an operational element of an underlying use of that land? The Energy Commission legal staff was asked to research this question and produced the following response:

A land use issue arises if a particular piece of property is not zoned to allow energy production equipment to be sited on it. Land use is a different issue from CEQA review. When a DG proposal is the project, a CEQA review is required. A number of public agency discretionary actions can cause a DG installation to become a project under CEQA. These actions include the following:

- 1) enacting or amending a zoning ordinance to accommodate a DG project at a site,
- 2) sponsoring a DG installation with public funds, and
- 3) issuing a conditional use permit.

Under the second action, for example, the local jurisdiction would have to do a CEQA review of a DG project regardless of the zoning, and the local jurisdiction would have to determine proper zoning regardless of the environmental impacts. The results of those two determinations may, and can, overlap when the decision maker has to determine what to do about zoning conflicts or whether to approve a conditional-use permit allowing the project.

Potential CEQA Exemptions

The CEQA Guidelines include two lists of classes of projects which are exempt from CEQA if they meet specified criteria: statutory exemptions and categorical exemptions. Statutory exemptions are granted by the Legislature while categorical exemptions are those which have been determined not to have a significant effect on the environment. Specifically, the Secretary of Resources has declared specific classes of projects to be categorically exempt from the requirement for the preparation of environmental documents. The Governor's Office of Planning

and Research entertains requests to amend CEQA Guidelines, which add, amend or delete classes of categorical exemptions.

One statutory exemption relevant to DG is for ministerial projects. Section 15268 of the CCR, Title 14, states the following:

Ministerial projects are exempt from CEQA. In the absence of any discretionary provision contained in the local ordinance or other law establishing the requirements for the permit, license or other entitlement for use, the *issuance of building permits* (emphasis added) is presumed to be ministerial. Local governments which have determined that a proposed project conforms with local land-use designations do not need to perform CEQA review before issuing building permits.

The CEQA Guidelines include four classes of facilities which are categorically exempt from CEQA and which could be applied to DG facilities. Each of these categorical exemptions is discussed below.

Cogeneration Projects at Existing Facilities

Section 15329 of the CCR exempts from the requirement to prepare environmental documents cogeneration projects that are 50 MW or less in net generating capacity and that are proposed to be located at existing facilities. Specifically, it establishes Class 29: Cogeneration Projects at Existing Facilities, and states:

At existing industrial facilities, the installation of cogeneration facilities will be exempt where it will accomplish the following:

- 1) Result in no net increases in air emissions from the industrial facility or will project emissions lower than the amount that would require review under the new source review rules applicable in the county, and
- 2) Comply with all applicable State, federal, and local air quality laws.

At existing commercial and institutional facilities, the installation of cogeneration facilities will be exempt where it will accomplish the following:

- 1) Meet all of the criteria set for cogeneration projects at existing industrial facilities (See above),
- 2) Result in no noticeable increase in noise to nearby residential structures,
- 3) Be contiguous to other commercial or institutional structures.

This categorical exemption was added to the CEQA Guidelines in the mid 1980 s to promote cogeneration. The rationale for adding the exemption was that a cogeneration project at an existing facility, which meets air quality standards, would generally not have significant

environmental impacts and thus would qualify for a CEQA exemption (barring any unusual circumstances — See Exceptions to Categorical Exemptions below).

Some industrial facilities may already have an electrical generator on site. At these sites, a cogeneration system would be added to produce electricity for the site and capture and use waste heat from the generator to produce more electricity. More commonly, however, existing industrial, commercial, and institutional facilities lack on-site electric generators. At these facilities, the cogeneration system would include a new electrical generator, plus equipment to capture waste heat, which would be used to produce steam or hot water for use at the facility.

This exemption is still being used. For example, the University of California San Diego filed a notice of exemption in March 2000 to site a 28 MW cogeneration facility at the campus's Central Utility Plant.¹⁹ The Commission staff, however, could find no other recent record of environmental documents being prepared for DG projects.

The staff suggested in the *Workshop Report* that the categorical exemption for cogeneration be expanded to apply to all DG technologies which can meet the same air quality and other criteria. Local air districts spoke against this idea at the workshop and hearing and filed written comments as well. Their issue is with diesel generators, the most common type of DG because these common emergency-generator technologies emit toxic air contaminants.

The next three types of categorical exemptions *may* apply to DG facilities, but they do not provide as clear a fit for DG facilities as the cogeneration facility exemption.

Existing Facilities

Section 15301 of the CCR provides a categorical exemption for existing facilities. These include the following:

[O]peration permitting or minor alteration of existing public or private structures, [and] mechanical equipment, involving negligible or no expansion of use beyond that existing at the time of the agency's determination. Examples include but are not limited to:

Interior or exterior alterations involving such things as electrical conveyances
Existing facilities of both investor and publicly-owned utilities used to provide electric power

The above section suggests that minor alterations of existing structures are exempt from CEQA review, provided the project does not significantly expand the use of the facility beyond the uses already allowed at the site by the permitting agency.

¹⁹ State Clearinghouse No. 2000038044

The representative from SMUD said that PV systems installed on residential roof tops through its PV commercialization program (described in building permit section below) do not require any land-use permit (or CEQA review), only a building permit. PV systems are exempt because they are installed on existing residences.

Section 15301 also suggests that DG equipment installed at existing sites of electric utility companies (e.g., substations) might also qualify for CEQA exemption. An environmental attorney for SCE filed comments, which stated that adding on-site generation to an existing electrical substation site would *not* qualify for an exemption from CEQA exemption. His explanation was that the DG equipment would represent a new use at that substation site — on-site power *generation*, when the current use at that site is only for electricity *distribution*.

New Construction or Conversion of Small Structures

Section 15303 of the CCR creates a categorical exemption for the following:

...construction and location of limited numbers of new, small facilities or structures, installation of small new equipment and facilities in small structures, and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure

This section applies to the construction of additional, new dwelling units, multi-family housing, and small commercial structures (e.g., stores, motels, offices, and restaurants) on land already zoned for these uses and densities. It does not state specifically that DG facilities would qualify as small new equipment and facilities in small structures, but certain types of DG may qualify if they have small footprints and the site's zoning allows power generation to occur there.

Replacement or Reconstruction

Section 15302 of the CCR exempts from CEQA as follows:

replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will be substantially the same purpose and capacity as the structure replaced, including but not limited to:

- (c) Replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion in capacity

This section may apply to the eventual replacement of one DG facility with another one, provided its physical or generating capacity remains the same.

Exceptions to Categorical Exemptions

The CEQA Guidelines include a number of exceptions regarding eligibility for categorical exemptions. Two exceptions which apply to all classes of projects include significant effect and cumulative impacts.

The exception for significant effect prevents a CEQA exemption for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to *unusual circumstances*. [emphasis added] This exception appears to give the permitting agency broad authority to deny a categorical exemption.

The CEQA Guidelines also state, [a]ll exemptions are inapplicable when the *cumulative impact* (emphasis added) of successive projects of the same type in the same place, over time is significant. Many air districts and others at the workshop and hearing expressed concern that fossil-fueled DG facilities in an area would create cumulative impacts. If a permitting entity tracks the number of DG facilities being permitted in an area over time and it perceives that too many are being installed, then the permitting agency has the option to require individual projects to have a CEQA review rather than using a CEQA categorical exemption.

Potential CEQA Streamlining Strategies

The California Trade and Commerce Agency, Office of Permit Assistance (OPA) conducts a Local Permit Streamlining technical assistance program for local governments. (For more information on the services provided to local governments, see OPA's Web Site at www.commerce.ca.gov/business/permits_assist/.) OPA's Web Site suggests local governments use the following three-step process to screen projects:

- 1) Determine if the project is exempt from CEQA pursuant to statute or the State CEQA Guidelines. List projects the local government commonly encounters that are exempt from CEQA.
- 2) For non-exempt projects which do not result in a significant environmental effect, prepare a negative declaration. Or, prepare a mitigated negative declaration if the project would have an effect, but the effect can be reduced to a level of insignificance by project revisions or mitigation measures.
- 3) Prepare an environmental impact report (EIR) only if the project has a significant effect that cannot be mitigated to a level of insignificance.

The OPA Web Site also suggests local governments use the following methods to expedite environmental review:

- Establish local, measurable thresholds of significance to guide the evaluation of projects.

- Use existing general plan, specific plan, project or program EIRs that have previously analyzed potential impacts on the project site, or have analyzed similar projects.
- For projects that require review under both CEQA and the National Environmental Policy Act (NEPA), the two reviews may be combined into a single environmental document, pursuant to the CEQA Guidelines.
- For projects which pose significant environmental impacts and so clearly require an EIR, the initial study phase may be bypassed. The lead agency may proceed directly to the Notice of Preparation. This could save the project applicant and locality the 30 days of initial study. An initial study may be used to "focus" the project review on issues which may be significant, and used to reduce the scope of the EIR.
- CEQA does not require analysis of project impacts which are clearly insignificant. Projects in violation of either policy or ordinance with a limited chance of mitigation should be identified as early as possible.

Drawing from the OPA's suggested strategies and the Siting Committee's proceedings, the Energy Commission staff prepared the following strategies specifically for CEQA review of DG facilities.

1. Set Thresholds of Significance

The initial study stage of the CEQA review process could be expedited if local governments established local, measurable thresholds of significance to determine whether a proposed project might exceed any of them.

The environmental factors deemed by the Energy Commission staff to be the most relevant to DG projects are provided below with questions the local jurisdiction might ask when performing the initial study:

- Aesthetics — Will the DG project substantially degrade the existing visual character of the site and its surroundings?
- Air quality — Will the project violate any air quality standard or contribute significantly to an existing or projected air quality violation? Would it result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment (including ozone precursors)? Would it expose sensitive receptors to substantial pollution concentrations? Would it create objectionable odors?
- Hazards and hazardous materials — Are hazardous materials going to be used?
- Hydrology/Water quality — Would the project violate any water quality standards or waste discharge requirements?

- Land use and planning — Would the project conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact?
- Noise — Would the project expose people to noise levels in excess of local standards or excessive ground vibration?

2. Revise a Project to Mitigate its Significant Environmental Impacts

DG developers can expedite the CEQA review process by agreeing to mitigate the potential, significant environmental impacts of their project. The public agency would then be able to prepare a mitigated negative declaration, rather than a full EIR. As noted above, CEQA Guidelines set a six-month time limit for preparing mitigated negative declarations, while full EIRs can require up to one year.

The survey of local government environmental review of DG projects revealed that the most extensive environmental document that has been prepared for a DG project has been a mitigated negative declaration. The City of Irvine, for example, issued a mitigated negative declaration to support a conditional use permit for a fuel cell project at a Hyatt Hotel, which was conducted by Southern California Gas Company approximately eight years ago. The Commission staff has been unable to determine whether an EIR has ever been prepared for a DG project.

3. Addressing Cumulative Impacts through a Program EIR or Master EIR

At the workshop and hearing, many speakers expressed concern that if too many DG projects were permitted and installed in an area, their cumulative impacts could become significant. The major concern was the cumulative impact on ambient air quality, but it was noted at the workshop and hearing that other kinds of environmental impacts could accumulate as well. The cumulative impacts from several projects are defined as follows:

the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Project EIRs, those prepared for individual projects, must include an analysis of the potential cumulative impacts. This analysis is usually difficult to do because agencies may not know how many DG facilities already exist in the area (e.g., those which are permit exempt), and they do not know how many DG facilities will likely be proposed in the future.

Rather than addressing the issue of cumulative impacts on a project-by-project basis, CEQA allows public agencies to address them in a master EIR or a program EIR. Once either of these documents has been certified by the agency, future environmental documents for individual DG

projects can refer to the master EIR or the program EIR to avoid conducting further cumulative impact analyses.

According to CEQA Guidelines, a program EIR is an environmental document which may be prepared on a series of actions that can be characterized as one large project and are related geographically. Using a program EIR can provide the following advantages:

- Provide an occasion for more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual project,
- Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis,
- Avoid duplicative reconsideration of basic policy considerations,
- Allow the public agency to consider broad policy alternatives and program wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and
- Allow reduction in paperwork.

The process of preparing EIRs for fossil-fueled DG projects could be streamlined by the agency preparing a program EIR. The program EIR would analyze all of the possible effects, including cumulative impacts, and develop feasible mitigation measures and alternatives to address these significant impacts. DG project developers, who have proposed projects in that geographic area, would be required to adopt the mitigation measures cited in the program EIR into their individual project plans. And if the local jurisdiction determines that the proposed distributed generation project is within the scope of the program EIR, no further environmental documents would be required. This approach offers many possibilities for public agencies to reduce their costs of CEQA compliance and still achieve high levels of environmental protection.

A master EIR is an alternative to a project or a program EIR, but like a program EIR. The master EIR is intended to streamline the later environmental review of projects that are included within the scope of the master EIR. According to CEQA Guidelines, a master EIR shall, to the greatest extent feasible, evaluate the cumulative impacts, growth-inducing impacts, and irreversible significant effects on the environment of subsequent projects.

A public agency is allowed to prepare a master EIR for a project that consists of smaller individual projects which will be carried out in phases. After a master EIR has been prepared and certified, subsequent projects which the public agency determines as being within the scope of the master EIR will be subject to only limited environmental review.

4. Educate Local Jurisdictions and the Public about DG Technologies and their Environmental Impacts

Currently, individual DG project developers must spend time and money educating regulators and the public about DG technologies. Many industry participants suggested that the permitting process can be streamlined by shifting this educational burden to the State. Specifically, they felt that the Energy Commission or others should provide technical, non-product-specific

information about DG technologies to the staffs of local government and the public, to help them understand the general concept of DG, where DG has been permitted already, and its possible environmental impacts.

Because certain DG technologies are emerging technologies or have not been previously and regularly introduced into communities, the environmental and public health and safety impacts of certain types of DG are unknown to local planners and the public or are not clearly defined by project developers. There are currently no readily available summaries of the potential environmental impacts for typical DG technologies. As a result, identifying suitable mitigation measures (where applicable) and conditions of approval may require several iterations of information exchange between the project developer and the agency.

5. Prepare a Draft Model Ordinances for Distributed Generation Facilities

In the early 1980 s when local governments were asked to approve wind farms in their jurisdictions, the Energy Commission developed and distributed a *Draft Model Ordinance for Small Wind Energy Conversion Systems*. This draft ordinance was adopted by a number of local jurisdictions. In March 1998, the National Wind Coordinating Committee established a Siting Subcommittee, which updated this earlier work and published the *Permitting of Wind Energy Facilities Handbook*. Similar documents could be published for other types of DG technologies.

Results from Planning and Community Development Survey

This survey asked planning directors how DG is defined in their current zoning ordinances, whether they had ever received a conditional-use-permit request to install a DG project and, if so, what kind of environmental document was prepared. It requested planning directors to give feedback on which information services (choices provided) might help them to conduct environmental reviews or issue use permits for DG projects.

The responses to this survey revealed that DG has not been defined by the majority of local jurisdictions although some define it as public utility facilities, electric generating plants, or by technology type (e.g., cogeneration, wind). Many definitions include the word utility. These definitions reflect an era in which electric utilities owned most electric generation facilities. A few jurisdictions characterize DG as an accessory use to a main land-use, in which case a conditional use permit is not required. Even fewer jurisdictions distinguish whether the DG project is intended to generate electricity for on-site use only or for off-site sales. Projects with intent to sell electricity must obtain use permits.

The survey results also revealed that most cities and counties have not received an application for a use permit to install a DG project. This result may be valid: very little DG land-use permitting has occurred. This result can also mean that local governments do not recognize many of the

common types of electric generation, such as emergency generators, as DG. Thirdly, this result could mean that emergency generators are not required to obtain land-use permits.

Of the six local jurisdictions acknowledging requests for use permits, the types of environmental documents prepared were mitigated negative declarations (4), negative declarations (1) or Notices of Exemption (1). None had prepared an EIR.

When asked what types of information services might help with environmental review and permit approval, most respondents indicated interest in receiving the following: a best practices list of suggested mitigation measures (84%) and information on the appearance of the specific DG project being proposed (74%). Information on the appearances of types of DG projects was also deemed potentially useful (69%). Few respondents, however, thought receiving assistance in preparing a master or a program EIR covering future DG installations in their region would be helpful (13%). If the Energy Commission commits staff resources to providing this type of information to local government planning departments, these survey results should be used to set the priorities. DG project developers, however, should remain responsible for providing all project-specific information.

Table 5 summarizes the findings on the CEQA review and land-use permitting process.

Table 5: Summary of Findings regarding CEQA & Land-Use Approvals

CEQA Review & Conditional Use Permit Applicability	Exemptions from Process	Potential Streamlining Opportunities for Non-exempt DG Projects
<p>When a DG developer applies for a building permit, the project is also reviewed by the jurisdiction's Zoning Administrator to ensure that the proposed use²⁰ complies with all provisions of the zoning ordinance for that parcel of land or building.</p> <p>If the Zoning Administrator determines that the project is a <i>change</i> of use, no building permit shall be issued until the Zoning Administrator performs a new zoning conformance review. If necessary, the project developer may need to request a CUP or zoning change. A CEQA review must be conducted before the local jurisdiction may approve a CUP or zoning change because these approvals are discretionary acts.</p>	<p>CEQA Statutory Exemptions Ministerial acts of local government, such as issuing building permits, are CEQA exempt.</p> <p>CEQA Categorical Exemptions Cogeneration facilities at existing industrial, commercial, and institutional sites, which meet specific air quality and other criteria, are CEQA exempt.</p> <p>Existing facilities, including facilities used by both investor and publicly-owned utilities to provide electric power are CEQA exempt, provided the DG addition is not a new use of the existing site.</p> <p>New construction or conversion of small structures, such as small new equipment and facilities in small structures, are CEQA exempt.</p> <p>Replacement or reconstruction, such as existing utility systems and/or facilities involving negligible or no expansion in capacity are CEQA exempt.</p> <p>Conditional Use Permit Exemptions If the DG project is an allowed use (conforms with local zoning ordinance), then no conditional use permit is required. Accessory use to a main use may also be allowed without a use permit.</p>	<p>Update General Plan, zoning ordinance indicating where different types and sizes of DG are either allowed, require permits or zoning changes, or are prohibited. Clarify when DG is a change in use.</p> <p>Prepare model ordinance for types of DG.</p> <p>Develop lists of DG projects that local governments may encounter that are exempt from CEQA.</p> <p>Expand categorical exemption for cogeneration to other types of DG.</p> <p>Set thresholds of significance for the environmental effects of DG projects.</p> <p>Provide best practices list of mitigation measures for specific types of DG.</p> <p>Revise project to avoid or mitigate environmental impacts, so that mitigated declarations can be prepared, rather than EIRs.</p> <p>Provide the planning staff with DG technology descriptions and environmental profiles.</p> <p>Provide public education materials re: DG for developers to use at public hearings.</p> <p>Encourage and help planning agencies to prepare a program or master EIR, to address the cumulative air quality impacts of combustion-type DG.</p>

²⁰ Use is the purpose or activity for which land is zoned or a structure is used.

B. BUILDING PERMIT PROCESS

This section addresses the following questions:

- When are building permits required?
- Can certain types of DG qualify for exemption from building permits?
- Which building codes apply to different types of DG facilities, including emergency generators?
- What could be done to streamline the building permitting process?

It also highlights work being done by others to streamline the building permitting process for DG technologies.

The workshop and hearing were not well attended by the city and county staff involved in permitting DG equipment. Project developers, however, shared their experiences in applying for and obtaining building permits for different types of DG equipment. The issues or problems they raised were the following:

- The local government staff does not know how to evaluate plans for DG.
- The codes do not address some DG technologies
- Codes vary from jurisdiction to jurisdiction.

Building Permit Process Description

Building codes provide *minimum standards* for the protection, safety, and welfare of the public, property and the environment. They are not intended, however, to limit the appropriate use of alternate materials, appliances, equipment, or methods of design or construction that are not specifically prescribed by the code. If the local building official determines that the proposed alternative is equivalent to that prescribed in the code, then the alternative can be used.

The California Building Standards Code (CCR, Title 24) applies to all buildings and structures in the state. The following parts of the Code are relevant to DG installations:

- California Building Code (general building design and construction requirements, including fire-and life-safety and field inspection provisions)
- California Electrical Code (technical requires for all electrical power supplies)
- California Mechanical Code (mechanical standards for the design, construction, installation, and maintenance of heating, ventilating, cooling and refrigeration systems, incinerators, and other heat-producing appliances)
- California Plumbing Code (requirements for natural gas pipeline additions)
- California Fire Code (requirements for on-site fuel storage)

Using these codes, the building department staff issues permits, reviews plans and performs field inspections to determine code compliance. Residential plans are reviewed by a plan checker for evaluation of all building systems and components. Commercial plans are reviewed by a staff of specialists, each evaluating a specific discipline, including structural components, electrical, plumbing, and mechanical systems.

Developers of DG projects can apply for building permits at the same time as they apply for discretionary entitlements, such as rezoning or conditional use permits (if discretionary entitlements are needed). The rezoning or conditional-use permit, however, must be approved *before* the local jurisdiction will approve the building permit.

California Building Code and Electric Code Provisions for Emergency Generators

The California Building Code requires that local government building officials classify every building within their jurisdictions according to its use. It also requires that certain building classifications provide standby or emergency power when the normal electrical supply system is interrupted. The staff did not conduct a detailed review of which classes of buildings currently must have emergency or standby power supplies, but examples include divisions within the following groups: Business (Group B), Hazardous (Group H), Institutional (Group I) and Residential (Group R). Emergency systems are generally installed in places of assembly where artificial light is required for safe exiting and panic control in buildings subject to occupancy by large numbers of persons, such as hotels, theaters, sports arenas, health care facilities and similar institutions. Emergency systems may also provide power for such functions as ventilation, fire detection, elevators, fire pumps, public safety communication systems, and industrial processes where power current interruption would produce serious life, safety, or health hazards.

The building code further requires that emergency generators be fueled by an *on-premises fuel supply* of sufficient storage capacity to fully power required electrical equipment for a specified number of hours²¹. This requirement is the main reason why emergency generators are usually diesel-fired, although gasoline or propane can also be stored on-site. The California Electrical Code expands on the on-site fuel requirements. It states that where internal combustion engines are used as prime movers, they shall not be solely dependent upon a public utility gas system for their fuel supply. The basis for this limitation on natural gas is that delivery might be interrupted by the same emergency, which caused the normal electrical supply system to fail, such as an earthquake. Dual fuel systems are allowed, provided the equipment has automatic transferring capability. Local jurisdictions may allow the use of other than on-site fuels where there is a low probability of a simultaneous failure of both the off-site fuel delivery system and power from the outside electric utility company²².

²¹ Article 403.8 of the California Building Code

²² Article 700-12 (b) (3) of the California Electrical Code

The California Electrical Code provides the technical requirements for installation, operation and maintenance of emergency systems²³. Periodic testing ensures that the emergency systems are maintained in proper operating condition. The code allows peak load shaving operation for satisfying the test requirement.²⁴ The intent of this provision is to enable equipment owners to avoid redundant operation: once for peak load shaving and, again, for testing. Air districts, however, view it as a loophole to avoid air-permit limits on emergency generator use only during power outages.

Other DG Equipment Covered by the 1998 California Building and Electrical Codes

The California Building Standards Code is updated every three years. Within each update, the code has been recognizing new types of DG equipment. Below is a mini-directory showing where some types of DG technology is included in the California codes:

- Combustion engines and gas turbines — See Section 413A of the California Building Code. This section adopts by reference the 1994 edition of the National Fire Protection Association's (NFPA), *Standard 37 for the Installation and Use of Stationary Combustion Engines and Gas Turbines*.
- PV systems — See Article 690 of the California Electrical Code. This article covers solar PV systems, including the array circuits, power conditioning units, controllers and storage batteries. It defines these system components and provides circuit requirements, disconnection means, wiring methods, grounding, marking, and connection to other sources.
- Storage batteries — See Article 480 of the California Electrical Code.

In the next code update, fuel cells will be added.

Building Permit Applicability

All *new* construction requires a building permit. And, all additions or replacements of the following equipment or building structural components require building permits: heating and air conditioning equipment, water heaters, new electric circuits, electric services change, re-wiring, water service replacement, sewer service replacement, gas line replacement, and re-plumbing. Construction cannot begin until the local jurisdiction has received the building permit fee and issued the building permit.

²³ Article 700 et. seq. of the California Electrical Code

²⁴ Article 700-5 (b) of the California Electrical Code

Building Permit Exemptions

Certain types of equipment may be exempt from obtaining building permits and certain types of building owners are exempt from obtaining building permits, regardless of the type of DG equipment they are installing.

Appliances are exempt from obtaining building permits because their installation does not require any new construction or modifications to the structural components of an existing building (e.g., electric wiring, gas lines). Given these criteria, however, it is not clear whether certain types of DG equipment (i.e., portable) could be exempted from obtaining building permits.

In general, private citizens must obtain building permits, but permit exemptions are provided by law to some government entities and to CPUC-regulated electric utilities.

Local agencies, for example, are exempt from building ordinances of the city or county government where they are constructing facilities for the generation, storage, or transmission of electrical energy.²⁵ State-owned buildings under the jurisdiction of the State Fire Marshal are exempt from *building* permits, but not from obtaining other types building permits, including plumbing, electrical, and mechanical permits.²⁶ In addition, the University of California and California State University system from obtaining building permits.

The California Electric Code exempts CPUC-regulated electric utilities from obtaining electrical permits under certain conditions. This exemption has been used to install a microturbine in a department store in San Diego without obtaining an electrical permit from the City of San Diego. The conditions include that the generation equipment be owned, operated and maintained by the electric utility.

Opportunities for Building Permit Streamlining

This subsection discusses how to streamline the building permitting process for distributed energy generation projects. The staff conducted research on this subject and presents its findings below.

1. Educational Services to Building Department Staff

On an annual basis, the city of Sacramento, alone, issues more than 12,000 building permits and conducts more than 80,000 inspections. With this kind of workload, it is not surprising that the building department staff lack time to develop in-house expertise about DG technologies, applicable codes, appropriate code interpretations, and inspection procedures. If they were to receive many applications to permit DG at the same time, local jurisdictions might be able to

²⁵ CGC Section 53090 et. seq. The definition of local agencies includes utility districts providing electrical services, such as SMUD.

²⁶ Section 106.2 of the California Building Code, item 12.

justify having their staff specialize in reviewing distributed-generation-project applications, issuing permits and inspecting projects or contracting with outside experts. Until that time, however, local jurisdictions may prefer to receive training or one-on-one technical assistance on DG permitting.

More than half of the building departments responding the Commission's survey indicated that the following information services would help them conduct their plan checking and field inspections of DG projects more efficiently:

- Written guidelines of which building codes apply to which types of DG projects
- Regional training on building code applicability and interpretation for each type of DG projects
- An inspection checklist for specific types of DG
- Regional training in how to inspect specific types of DG installations

2. Obtain Underwriters Lab or other Nationally Recognized Testing Laboratory's Certification

The workshop included a presentation by a microturbine manufacturer, who mentioned that his company meets the various requirements of customers by providing them with assurances in the form of a UL certification.²⁷ UL is an independent, not-for-profit product safety testing and certification organization. It tests products for public safety in five testing laboratories in the United States. Products eligible to carry the UL label are ones that have had samples evaluated that meet UL requirements and which are periodically checked by UL at the manufacturing facility. Local building departments use the UL or other national testing laboratory listing as a measure of a product's safety and acceptability. Therefore, one way to streamline the building permit process is for DG equipment manufacturers to obtain such listings for their products.

UL offers a testing and certification service for DG equipment and energy sources because many utilities have requested UL's involvement in developing certification and performance testing requirements for grid interconnected devices. The UL staff is now actively developing requirements for the following DG products and devices:

- PV panels and modules
- Fuel cells
- Engine generators and microturbines
- Wind power generators
- Inverters, converters, charge controllers and utility interconnection requirements
- Transfer switches

The UL claims that it has the capability to evaluate virtually any DG product.

3. Educate and Perform Outreach to Building Inspectors

²⁷ Some PV products are also UL listed.

The PV Alliance supports acceptance of their projects by local building department staff by the following:

- Conducting technical training for building inspectors
- Exhibiting at building official trade shows and conducting training sessions at their conferences
- Publishing articles in building trade journals
- Sponsoring development of installation protocols for roof-mounted systems

The PV Alliance is also developing a Web Site for building inspectors to access more easily all relevant sections of the National Electrical Code (NEC[®]) relating to PV inspections.

4. Develop Standard Permit Application Packages

At the April workshop, a representative from SMUD explained what it has done to streamline building permitting and inspections of PV systems on residential roof-tops in the Sacramento region. Specifically, SMUD has developed, with input from the five jurisdictions within Sacramento County, a standard permit application package for PV projects.

5. Provide Research Assistance on Multiple Agencies Permit Requirements

Individuals wishing to install DG must first answer the following basic questions:

- Which agencies need to be involved?
- What regulations/codes apply?
- Where are the application forms?
- What information does each application require?
- How much do I have to pay?

These questions are not unique to DG projects. Many businesses wishing to establish or expand operations in California need answers to the same questions.

The State of California has at least two agencies providing single source referral services to help California businesses learn about and comply with the various environmental and other permitting requirements:

- 1) California Environmental Protection Agency (See the CalGold Web Site <www.calgold.ca.gov> for a listing of its 13 Permit Assistance Centers and description of services.)
- 2) California Trade and Commerce Agency (See its Office of Permit Assistance Web Site <www.commerce.ca.gov/business/permits_assist/> for a description of its services.)

In addition, the Governor's Office of Planning and Research acts as a liaison between local government, public and private interests on land-use and environmental planning issues.

Lastly, State and local regulatory agencies coordinate some environmental permitting through the California Certified Unified Program Agency (CUPA) program. Specifically, each city and county has designated a lead (CUPA) agency to coordinate all hazardous waste permitting.

6. Develop Uniform Codes for Distributed Generation

At the workshop, an equipment manufacturer's representative complained that the fire codes vary from jurisdiction to jurisdiction in California. The lack of uniform codes is relevant not only to DG projects, but to other types of construction as well. Uniformity among building codes is supposed to be accomplished by having all local jurisdictions adopt the California Building Standards Code. Local governments are only allowed to modify these standards if the governing body (i.e., City Council or County Board of Supervisors) makes express findings that an amendment is necessary because of local climate, geological or topographical conditions (Health and Safety Code (HSC) sections 18941.5 and 17958.7). Governing bodies may adopt only more-restrictive amendments. Furthermore, their amendments are only effective and operative if they have been filed, with the local jurisdiction's express findings, with the California Building Standards Commission (HSC 17958.7).

The California Building Standards are applicable throughout California whether or not the local government takes an affirmative action to adopt them. Inconsistency among building codes throughout California, therefore, may be caused by local jurisdiction amendment of the State Building Standards Code to reflect local differences.

According to the State Building Standards Commission, some local governments may be unaware of their obligation to adopt and enforce only the State Building Standards Code²⁸. The Code is based on model codes developed by national organizations, comprised of officials who are responsible for enforcing building codes in their state and local jurisdictions. These model codes, however, may have been modified by the State agency that is responsible for developing its part of the State Building Standards Code. Another cause of inconsistency, therefore, may be that local governments are enforcing the model codes, rather than enforcing the California State Building Standards Code.

These model codes are as follows:

- Uniform Building Code of the International Conference of Building Officials
- National Electrical Code of the National Fire Protection Association
- Uniform Mechanical Code of the International Conference of Building Officials
- Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials, and
- Uniform Fire Code of the International Conference of Building Officials and the Western Fire Chiefs Association.

²⁸ See Building Standards Bulletin 99-01 at the California Building Standards Commission Web Site: < www.bsc.ca.gov >.

Tackling the issue of inconsistent codes to help streamline the building permit process for DG would be an important step.

Silicon Valley Uniform Code Program

The Silicon Valley Uniform Code Program was conducted by 27 cities and two counties to improve the Silicon Valley region's regulatory climate by promoting building code consistency and reducing regulations, while maintaining high safety standards. Program sponsors were Joint Venture: Silicon Valley Network, Santa Clara Valley Manufacturing Group, and the Peninsula Chapter of the ICBO. Specifically, these local jurisdictions reduced the number of local amendments to the State Building Standards Code by 97 percent: from more than 400 to 11. Information on this program is available at the Joint Venture: Silicon Valley Web Site: www.jointventure.org/initiatives. In addition to this regional effort, the Web Site highlights building-permit streamlining projects completed by the cities of Sunnyvale, Cupertino, and Fremont.

In addition to the Silicon Valley efforts, similar efforts are underway in Los Angeles and San Diego to provide joint efforts among local jurisdictions to coordinate efforts among agencies.

Urban Consortium Energy Task Force

The Urban Consortium Energy Task Force (Energy Task Force) received funding from the U.S. Department of Energy's Municipal Energy Management Program in 1999 to conduct research on building code and permitting issues for DG projects. On October 2-3, 2000, the Energy Task Force held a workshop entitled *The Role of Distributed Generation in Municipal Government*, which was attended by the building code enforcement and planning personnel of several major U.S. cities. The attendees worked in breakout sessions to identify specific building code issues and actions to resolve the issues. Suggested actions included developing a Web Site to encourage information sharing. For example, the proposed Web Site would post: 1) case studies in how local governments have interpreted the building codes when installing DG projects, and 2) a comparison of building code differences between the City of San Diego and the City of San Jose.

DG-Related Updates to the Electric Code

The DG industry is already helping to update the electrical code. For example, the PV Alliance — a consortium of PV equipment manufacturers, vendors, utilities, and State agencies, worked on an Institute of Electrical and Electronic Engineers (IEEE)²⁹ committee to develop IEEE 929, which contains the basic safety and performance requirements specified by most utilities for static inverters and charge controllers for use in PV power systems. Once developed, these

²⁹ IEEE is a non-profit, technical professional association of electrical engineers, which develops electrical standards.

requirements were subsequently adopted by UL (as UL 1741) for its use in testing and rating inverters.³⁰

IEEE has established IEEE Standards Coordinating Committee 21 to oversee development of standards for fuel cells, PV, dispersed generation, and energy storage. The committee coordinates efforts in these fields among the various IEEE Societies and other affected organizations to ensure that all standards are consistent and properly reflect the views of all applicable disciplines. It also reviews all proposed IEEE standards in these fields before their submission to the IEEE-Standards Association Standards Board for approval and coordinates submission to other organizations.

PV Alliance members also worked on the National Electrical Code[®] to add PV system wiring requirements. The NFPA publishes NFPA 70, National Electrical Code[®], which forms the basis for electrical codes in the United States. The adoption and enforcement of the National Electrical Code protects public safety by establishing requirements for electrical wiring and equipment in virtually all buildings. More specifically, the NEC[®] covers the following:

- the installation of electric conductors and equipment in public and private buildings,
- industrial substations, and
- emergency and stand-by power.

Building Official Survey Results

This survey asked whether the local jurisdiction had ever received a building permit application to install a DG project and whether the local jurisdiction had ever inspected a DG installation. If the local jurisdiction answered Yes to either question, it was asked to provide information about the number and type of DG systems involved. The survey also solicited feedback about which information services might help building department staff who review plans and who perform field inspections (separate lists of choices provided to each) to evaluate DG projects.

This survey's results revealed that only four in 10 local jurisdictions had received building permit applications for DG projects. This number seems low, considering that the building code requires many classes of buildings to install emergency generators. The building departments responses may have been for stand-alone DG projects, rather than construction permits for new buildings containing DG equipment. Local governments reported that they had inspected the same number and type of DG equipment as had applied for building permits. This result indicates two findings: 1) all requests for building permits were awarded, and 2) all permits resulted in actual DG installations. The top three types of DG projects being installed were solar PV, diesel generators, and cogeneration. Other DG projects permitted and inspected were wind turbines, small hydro electric, and gas turbines. (Local governments reporting wind turbine and cogeneration installations noted, however, that these systems were installed many years ago.)

³⁰ Inverters convert direct current to alternating current; they are common components of other distributed generation technologies besides PV.

The majority of plan checkers agreed that they would find value in receiving the following information materials and services:

- Written guidelines about *which building codes apply* to types of DG projects 77%
- Regional training on code applicability and interpretation for types of DG projects 62%
- Written guidelines about *how to interpret* building codes for types of DG projects 61%
- Model or standardized permit application package for types of DG projects 55%

In addition, responses included the following, suggested information materials or services: comprehensive code development, plan review checklist, and, equipment tested by a certified laboratory.

These results indicate that plan checkers would welcome technology-specific information, particularly written guidelines about which building codes apply to different types of DG technologies. Based on their earlier feedback about which types of technologies they are currently receiving permit applications for, local building departments indicated that the priority DG technologies might be solar PV and diesel generators. The staff suspects, however, that local government plan checkers have a greater need for information and training regarding PV technology because it is new.

Plan checkers were less enthusiastic about receiving written guidelines on *interpreting* the applicable codes, but they would welcome receiving regional training on both code applicability and interpretation. This result may mean that plan checkers wish to discuss code interpretation, rather than be told how to interpret the codes. The staff agrees that regional training regarding code interpretation would be more beneficial because if all jurisdictions were to attend this training, then a possible outcome could be greater agreement among the jurisdictions within the region about appropriate code interpretation.

Field inspectors were offered a different set of possible information materials and services to facilitate DG installation approvals. The two items receiving majority votes from building departments were: an inspection checklist for specific types of DG and regional training on how to inspect these DG projects. Again, based on their feedback on which types of DG technologies are most common, the priority might be given to assisting field inspectors with solar PV installations.

Table 6 summarizes findings on the local government building permitting process.

Table 6: Summary of Findings regarding Building Permits

Building Permit Applicability	Exemptions from Process	Potential Streamlining Opportunities for Non-exempt DG Projects
<p>All privately developed new construction projects, including those with DG equipment, must obtain building permits.</p> <p>Depending on the nature of the DG project, the following permits may be required:</p> <ul style="list-style-type: none"> • Electrical • Plumbing • Mechanical • Building • Fire <p>DG installations in existing buildings must obtain building permits if they involve building alterations or additions, including new electric circuits, re-wiring, new or replacement gas lines.</p>	<p>California Government Code exempts local agencies from obtaining local jurisdiction building permits.</p> <p>State-owned buildings are exempt from obtaining building permits, but their DG projects must still comply with the California Building Standards Code.</p> <p>Article 089-4 of the California Electrical Code exempts installations under the exclusive control of electrical utilities for the purpose of generation of electrical energy. Electric utilities, therefore, do not need to obtain electrical permits for DG installations, which they will own, operate and maintain.</p>	<p>Reduce the number of local amendments to the California Building Standards Code and to work together on uniform interpretations of the Code.</p> <p>Develop DG equipment test protocols for use by certification laboratories.</p> <p>Obtain UL or other nationally recognized testing lab certification for DG products.</p> <p>Train building department staffs how to check plans for DG projects (what codes apply, what project design details to require, how to interpret codes).</p> <p>Train building department field inspectors how to inspect DG projects.</p> <p>Develop and use standard permit application package for cookie cutter DG projects.</p>

C. AIR PERMIT PROCESS

This section addresses the following questions:

- When are air permits required?
- Can certain types of DG qualify for exemptions from air permitting?
- Can certain types of DG qualify for some form of streamlined air permit review?

This section highlights air district regulatory and policy activities that are already underway to address DG permitting issues.

Representatives from air districts and the CARB attended the Siting Committee's public meetings on DG CEQA review and permit streamlining. Agencies shared their concerns regarding the potential increased use of fossil-fueled DG technologies that may have public health impacts, with specific emphasis on diesel standby generators that may be deployed for peak shaving. The issues or problems that were raised include the following:

- Currently, air districts exempt certain emergency fossil fuel-fired DG installations from their permitting processes, but the cumulative impacts to the environment and public health from increasing numbers of installations in a region may be significant.
- Air quality requirements differ from district to district.
- Emissions from small fossil fuel-fired DG technologies are not as low as central power plant emissions on a pounds-per-Megawatt-hour (lbs/MWh) basis.
- Existing emergency diesel engines will be used for peak shaving and emit toxic air pollutants.
- The air quality impacts from DG technologies are dependent on the type of equipment, fuel, and application.

The air districts and the CARB stated that not all DG technologies should receive equal regulatory treatment, some renewable energy technologies and fuel cells have no or low emissions, while standby diesel generators should undergo more regulatory scrutiny if owners seek to increase their use. In this respect, the CARB is developing permit requirement guidelines for diesel engines. The Commission staff is continuing to discuss the air quality issues raised at the workshop and hearing with the CARB, as well as the California Air Pollution Control Officers Association and individual air districts. Developers and technology manufacturers shared their interest in streamlining the process for relatively clean, efficient technologies, with consideration for setting certification standards.

Air Permit Process Description

Depending on the size of a DG technology and its emissions profile, the air permitting process may be relatively straightforward (e.g., over the counter) or may involve several technical evaluations. In non-attainment areas, the permitting process may include evaluating whether

additional emission controls are necessary to reduce emissions, obtaining emission reduction credits, and evaluating potential air toxic emissions impacts.

Permit applications typically include completing and submitting district form(s), estimating emissions, providing equipment specifications, an operations plan, site plan and facility map, paying fees, and providing the results of various technical analyses. The air district staff review the air permit application, evaluate whether BACT applies or air toxics modeling (or other air quality analyses) is needed, and determine if emission reduction credits (offsets³¹) are required. BACT is an emission limitation taking into account energy, environmental and other economic impacts, and costs. The modeling analyses estimate the impacts to nearby residents and businesses. Emission reduction credits (if needed) must meet certain criteria, e.g., be permanent, quantifiable, real, surplus, and enforceable, as defined in the federal Clean Air Act..

Construction typically cannot begin until the air district has completed its evaluation and has issued an authority to construct. It should be noted, however, that in the Bay Area Air Quality Management District (AQMD), certain projects eligible for accelerated permit processing can begin construction as soon as an application and fees have been submitted (see below). After equipment has been installed, emissions testing may be required.

Air Permit Requirements for Diesel Generator

Air districts have relatively straightforward permitting processes for diesel standby or emergency generator engines. These engines are generally limited to annual hours of operation ranging from 52 to 200 hours. Allowable annual hours vary from district to district and provide time for engine readiness testing and maintenance. The criteria for operating these engines are specific to actual power outages and typically do not apply to distribution grid support for potential brown outs. However, it should be noted that some air districts broadly interpret their regulations to provide for the flexibility of operating these engines as peak shavers within an allowable 200 hours per year.

Engines must meet certain emission requirements and other permit conditions. Historically, permitting of these engines was not included in evaluating air toxic impacts or more stringent controls. More recently permitted engines, however, are equipped with additional controls (e.g., timing retard, aftercooler, turbocharger).

The CARB is in the process of developing final permit guidelines for new and existing diesel engine generators operating as standby, peak, or baseload units (see below). Special attention is being given to this equipment because of the State's recently developed diesel particulate air toxic risk factor. Previously, the individual gas and particulate constituents of diesel exhaust were evaluated for risk posed to the public. The new risk factor effectively represents the risk posed

³¹ Emission offsets are applicable in areas of nonattainment.

by the total diesel exhaust (vs. individual constituents) and results of risk evaluations using the new factor effectively result in the potential need for particulate controls (e.g., filters, catalysts).

Several air districts expressed concern at the workshop that existing diesel standby generators would be converted to peak shaving units and thus result in increased regional emissions, particularly during the hottest and smoggiest days. One of the workshop speakers noted, however, that when converting from standby to non-standby (status needed for peak shaving), such engines would have to amend their air permits at which time the district would address its concerns about increased emissions, such as requiring retrofit BACT controls and possibly emission offsets.

Air Permit Applicability

Any air pollutant-emitting equipment or process is potentially subject to some form of air quality agency review or tracking, depending on the quantity of air pollutants emitted from a DG technology or on its size (e.g., hp, MW, MMBtu/hr). An air permit (or some form of review by the air agency) is typically required for fossil-fueled technologies, both natural gas and liquid fuel-fired operations, including reciprocating internal-combustion engines and gas turbines.

Air Permit Exemptions

Each district has a list of equipment and operations that are explicitly exempt from air permit requirements. Certain sizes of DG technologies are expressly exempt from permitting: engines are typically exempt if they are less than 50 hp, and turbines are typically exempt if they are less than 300 kW. Exemption levels vary from district to district based on equipment capacity, heat input (MMBtu/hr), or emissions (lbs/day), and the district's attainment status.

Air districts have commented that lowering emissions thresholds for permitting exemption may be necessary to address the emissions from DG technologies that may proliferate and result in additional regional air quality burdens.

Fuel cells, which emit minute quantities of criteria pollutants, are explicitly exempt from permitting in the South Coast AQMD. Other air districts do not explicitly exempt fuel cells.

Potential Air Permit Streamlining Strategies

1. Set Uniform Emission Standards

Air pollution regulatory agencies and DG project developers suggested setting technology-specific maximum allowable emission levels for DG. Technologies below these levels would qualify for expedited permitting.

By knowing the allowable, technology-specific emissions and by projecting potential market penetration of exempt DG technologies, two objectives could be achieved: (a) air districts would

gain the ability to estimate regional emission impacts, and (b) manufacturers would know the technical performance targets to achieve when designing equipment improvements.

At the workshop, there was universal agreement among representatives from industry, regulatory entities, the public, and environmental organizations on the need for standards for use in evaluating and permitting DG projects. Although all agreed on the need for standards, there may not be agreement on the types of standards needed and what those standards should be.

Suggestions included the following:

- Uniform emissions standards, BACT standards for statewide use (e.g., pounds of a pollutant per kilowatt-hour).
- Industry standards for specific technology groups.
- Performance standards.
- Maximum size limits to prevent a project from becoming a land use issue.
- Waste discharge limits.
- Noise limits.

Manufacturer representatives said standards would be used by industry as benchmarks, which are to be achieved through product research and development, if necessary. Once their equipment meets the standards, then companies would be able to mass produce their equipment, thereby lowering DG project costs. The economics of DG projects are improved when equipment does not need to be customized for different markets within California.

California's New DG Emission Standards and Certification Program

In September 2000, the Governor approved Senate Bill 1298³², which sets uniform emission standards and establishes a certification program for some types of DG equipment by January 1, 2003. The types of equipment targeted for this new certification program and establishment of uniform emissions standards are those which are exempt from district permitting requirements. This provision ensures that emissions from all new DG installations are regulated either by the CARB or by the local air district.

The CARB is responsible for developing the emissions standards for the district-exempt electrical generation technologies. The new law allows the initial standards to reflect the best performance achieved in practice. The law allows any air district to establish DG emissions standards that are more stringent than those established by the CARB.

Once the emission standards are adopted by the CARB (target date: January 1, 2003), all electrical generation technologies must be certified by the CARB or permitted by an air district prior to use or operation in the state. No air district can authorize the siting or operation of any electrical generation technology for which State emission standards exist unless that technology complies with the applicable standards.

³² Now referred to as Chapter 741 of the Statutes of 2000

The new law also requires that the CARB provide guidance to air districts by January 1, 2003, on the permitting or certification of electrical generation technologies under the air districts' regulatory jurisdiction. The guidance shall address BACT for DG and, by the earliest practicable date, make those determinations equivalent to the level determined by the CARB to be the best available control technology for permitted central station power plants in California. The guidance shall also address permit streamlining and the potential for pre-certification of one or more types of electrical generation technologies.

2. Accelerated Permitting and Equipment Pre-Certification Programs

Two air agencies, the Bay Area AQMD and the South Coast AQMD, presented highlights of their efforts to accelerate permit processing.

The Bay Area has a program for sources that would emit less than 10 lbs/day and have no significant air toxic impacts. Under this program, construction can begin upon acceptance of the permit application.

Currently, the South Coast AQMD pre-certifies residential natural-gas-fired water heaters, which meet certain emission standards. Given a performance standard, the water heater is tested by an independent laboratory to determine if its emissions meet the standards. If the requirements are met, the equipment is certified and recertified triennially to ensure its performance. Pre-certified equipment can be installed without further air permitting. Equipment which does not meet the standard, however, cannot be installed within the district's jurisdictional boundaries.

Both the Bay Area and the South Coast AQMDs have existing equipment pre-certification programs for internal combustion engines. The South Coast's program has pre-certified several engines already, but the Bay Area's program has not received much industry interest to date. In such a program, pre-certification requests are initiated by the manufacturer. The users of pre-certified equipment then undergo a streamlined permitting process.

Other air districts may have other kinds of streamlined permit programs applicable to DG technologies, but the staff did not learn about them in time to include them in this publication.

Table 7 summarizes findings on the air-permitting process.

Table 7: Summary of Findings regarding Air Permits

Air Permit Applicability	Exemptions from Process	Potential Streamlining Opportunities for Non-exempt DG Projects
All DG projects proposing to use technologies, which emit regulated air pollutants, as determined by the local air district.	<p>Some renewable energy technologies, such as solar PV, wind, hydro-electric are air-permit exempt.</p> <p>Some local air districts may have exempted specific, low-emission fossil-fueled or biomass-fired DG equipment from obtaining air permits. Typically, exemptions are based on equipment capacity, heat input or emissions.</p>	<p>Set uniform emission standards and certify DG equipment which meets the specified emission or performance standards.</p> <p>Provide accelerated permitting for certified DG equipment.</p> <p>Provide guidance to the air district staffs on how to make BACT determinations.</p> <p>Assist DG equipment obtain emission reduction credits.</p>

III. CONCLUSIONS

Based on the work performed in this proceeding, the ability to streamline, or make more efficient, any CEQA review or permitting processes will take a combination of activities at the State and local levels. This section responds to the CPUC's request to identify opportunities to streamline the CEQA review and permitting process for DG technologies and offers conclusions for the Energy Commission to consider.

GENERAL CONCLUSIONS

Residential solar PV systems can be the fastest DG projects to permit. Within Sacramento County jurisdictions, for example, residential PV systems can receive all required approvals in only one day.

The factors that allow fast permitting of residential PV systems include the following:

1. Local jurisdictions' zoning ordinances may allow electric generation from PV systems at specific sites without first obtaining conditional use permits,
2. PV technologies do not emit air pollutants, so do not require air permits,
3. Because no conditional use or air permits are required from either the city or county planning department or the air district, no CEQA review is required,
4. The PV systems may use UL-listed components, which assures building departments that the equipment meets electrical safety standards.
5. The local electric utility, which is conducting the PV program, uses the same basic design for all PV installations. As a result, the building permit application package could be standardized.
6. The standard building permit application is complete (i.e., contains all required information) when it is submitted to the local building department for its review and approval.

The DG industry's concern that the CEQA review process imposes a year-long delay, in practice, appears to be unfounded. The staff has not been able to locate a situation where a local government has prepared *a full EIR* for a DG project. Preparing and reviewing an EIR could take up to one year, after the permit application has been accepted as complete by the permitting authority. The most extensive type of environmental document that the staff could locate for a DG project was a mitigated negative declaration³³. The CEQA review process for the project took six months.

Local governments can streamline the CEQA review process for *individual* DG projects by updating their zoning ordinances to clarify where DG projects (distinguished by technology type) are allowed, allowed with a conditional use permit, or prohibited. Then, for DG projects proposed in the zoning districts where conditional use permits are required, the local government could facilitate the project's approval by providing direction to DG developers regarding the

³³ This environmental document was prepared by the City of Chula Vista to support a conditional-use-permit decision for a 49.9 MW combustion turbine peaker, sponsored by PG&E Dispersed Generation.

thresholds of significance and standard mitigation measures for issues such as air quality, noise abatement and aesthetics. These two actions would enable DG project developers to know in advance:

- where the local jurisdiction generally allows DG projects, and
- what mitigation measures should be included in their project plans.

Local governments can streamline the CEQA review of *multiple* DG projects that are using the same technology by using *existing mechanisms* provided in the CEQA Guidelines: the program EIR or the master EIR. It would not be appropriate, however, for local jurisdictions to prepare a program or master EIR for dissimilar types of DG because the potential environmental impacts of dissimilar technologies would be too difficult to quantify and analyze.

The CEQA Guidelines also describe classes of projects that are exempt from CEQA review. Exempt classes include cogeneration projects at existing facilities that meet specific air quality, noise and other criteria. Air districts do not support expanding this CEQA exemption for *all types of DG that can meet the same eligibility criteria* because of their concerns about diesel-fired internal combustion engines and cumulative air quality impacts. In consideration of air districts' concerns and the CARB's efforts to impose new restrictions on diesel fuel and emissions, however, the timing is not right to pursue this CEQA streamlining option for diesel-fueled DG technologies.

SPECIFIC CONCLUSIONS

1. Can certain types of DG qualify for exemption from CEQA?

Yes. Certain types of DG *are* exempt from CEQA. These include cogeneration facilities at existing facilities, which meet specific eligibility criteria. Other types of DG systems may also qualify for CEQA exemption if they fit into the following classes of CEQA-exemption facilities:

- Existing facilities (Class 1),
- Replacement or reconstruction (Class 2), and
- New construction or conversion of small structures (Class 3).

2. Can certain types of DG qualify for some form of streamlined CEQA review?

Yes. The CEQA review process for negative declarations and mitigated negative declarations is limited to six months while the process for EIRs is one year. The types of DG which qualify for negative declarations are those which avoid or mitigate significant effects on the environment.

For DG facilities that undergo some form of CEQA review, information regarding DG technology characteristics, potential environmental impacts (e.g., aesthetics, noise, air,

hazardous materials) of the DG technologies, and standard mitigation measures would help in the review process.

Several air districts raised the concern that cumulative impacts may be a concern. That is, it is possible that the cumulative impacts of many insignificant DG projects may cause a local jurisdiction to require a full EIR for an individual DG project, even if its incremental impacts are small. However, as noted by one person (representing City of Roseville Planning Department), per CEQA guideline interpretation, it is unlikely that cumulative impacts of insignificant DG projects would cause a local jurisdiction to require a full EIR for individual projects with small incremental projects. The determination of whether a full EIR, therefore, would be based on an agency's interpretation of significance.

One way to address the issue of cumulative impacts is to prepare a program or master EIR. The results of such a program EIR could be useful to local agencies with land-use planning or air quality management responsibilities in the processing of negative declarations for qualifying DG technologies. Most local jurisdictions, however, are not interested in this option.

3. Can certain types of DG technologies qualify for a streamlined land-use permitting process?

Yes. The land-use permitting process could be streamlined by developing draft model ordinances for categories of DG technology and provide these draft ordinances to local governments for possible adoption. Educating local jurisdictions and the public, and drafting model ordinances help agencies better understand how DG fits in the regulatory environment and whether new ordinances are appropriate.

4. Can certain types of DG qualify for exemption from building permits?

Most construction projects will require building permits, unless the entity conducting the project has been specifically exempted from obtaining building permits in the State Building Standards Code or Government Code of Regulations.

Local agencies, such as SMUD, are exempt from obtaining building permits for constructing electric generation, storage, and transmission facilities.

State-owned buildings under jurisdiction of the State Fire Marshal are exempt from obtaining building permits, but are required to obtain plumbing, mechanical, and electrical permits.

Regulated electric utilities are exempt from obtaining electrical permits.

5. How can the building permit process be streamlined for DG?

Suggested strategies to streamline the building permit process include the following:

- Providing educational services to the staffs of building departments,

- Obtaining a UL or other nationally recognized testing laboratory's listing for the DG equipment or device,
- Encouraging local jurisdictions to work together to reduce the number of local amendments to the State Building Standards Code, as was done by the Silicon Valley Uniform Code Program and as is underway in Los Angeles and San Diego,
- Developing and using standardized permit application packages, and
- Providing permit assistance to DG project developers, which helps them understand what approvals they must obtain.

More than half of the building departments responding the Energy Commission's survey indicated that the following information services would help them conduct their plan checking and field inspections of DG projects more efficiently:

- Written guidelines of which building codes apply to which types of DG projects
- Regional training on building code applicability and interpretation for each type of DG projects
- An inspection checklist for specific types of DG
- Regional training in how to inspect specific types of DG installations

6. Can certain types of DG qualify for exemption from air permits?

Yes. DG equipment which does not emit air pollutants does not need to obtain air permits. Specifically, some renewable energy equipment (e.g., wind, photovoltaic and hydroelectric) are exempt from air permitting.

Also, DG equipment with air emissions below specific permitting thresholds (set by the district) are exempt from air permitting. For example, fuel cells do not need air permits when they are installed in South Coast AQMD.

It should be noted, however, that certain energy storage batteries emit toxic air contaminants and are, therefore, not exempt from obtaining air permits.

7. How can the air permit process be streamlined for DG?

Strategies to streamline the air permitting process include the following:

- Developing (statewide) uniform emission standards
- Creating an expedited permit process for pre-certified DG equipment
- Creating an expedited permit process for the lowest-polluting equipment
- Assisting DG projects in obtaining emission reduction credits, when needed

IV. RECOMMENDATIONS

This section presents the Energy Commission staff's recommendations regarding the Commission's potential role in facilitating efficient CEQA and land-use review, building permit process, and air permit process for DG projects.

GENERAL RECOMMENDATIONS

Clarify Energy Commission policy regarding Distributed Generation

The Energy Commission should articulate in policy why it believes that qualifying DG projects should receive special treatment by the State or local jurisdictions that results in streamlined CEQA review and permit processing. The Siting Committee recommends that the Commission assist only the cleanest DG technologies, such as solar PV and fuel cells, receive permit-streamlining support.

Clarify Energy Commission's role in CEQA review and permit streamlining

The Energy Commission needs to define its role, if any, in facilitating DG CEQA review and permitting.

The Energy Commission does not seek to replace local jurisdiction siting and permitting authority regarding DG facilities. Other State agencies already provide permit streamlining assistance to private developers and local governments, including the Cal-EPA Permit Assistance Centers, the California Trade and Commerce Agency's Office of Permit Assistance, and the CARB. The Energy Commission's unique contribution could be its technical knowledge of various DG technologies and how to mitigate environmental impacts of electric generation facilities.

Any technical assistance provided by the Energy Commission should be targeted.

Any technical assistance services should be targeted to local governments, rather than to private DG developers. This approach would enable the Energy Commission to maintain its neutrality regarding the acceptability of individual DG projects, while still facilitating DG project deployment. Three levels within local government should be targeted for services: elected officials, planning department staffs and building department staffs. Furthermore, building department services should be targeted for plan checkers and field inspectors.

SPECIFIC RECOMMENDATIONS

1. The Siting Committee recommends that the Energy Commission direct the staff to work with local government planning staffs in developing the following:
 - Lists of DG projects that are exempt from CEQA,
 - Thresholds of significance in key environmental issue areas, including air quality, noise and aesthetics, and

- Standard mitigation measures for the types of DG technologies which have the potential to cause significant environmental impacts in key environmental subject areas, including air quality, noise and aesthetics.
- 2. The Siting Committee recommends that local governments consider preparing a master EIR if they are observing a significant increase in requests to install gas turbines and diesel generators. A master EIR can address the cumulative air quality impacts from these projects.
- 3. The Siting Committee recommends that the Energy Commission direct its staff to pursue amendments to the CEQA Guidelines to expand the categorical exemption, which currently exists only for cogeneration projects at existing facilities, to all types of DG technologies that meet the same eligibility criteria. The Siting Commission does not recommend, however, that diesel generators be included in the CEQA amendment proposal to the Resources Agency because air quality regulators oppose including them due to concerns about toxic air contaminants.
- 4. The Siting Committee recommends that the Energy Commission assign its staff and commit contract dollars, if needed, to assist the CARB in planning the new DG emission standards and certification program. The Energy Commission's research and development programs may be particularly useful in providing field data to characterize DG emissions and performance achieved in practice.
- 5. The Siting Committee recommends that the Energy Commission assign its staff to contact the local jurisdictions that will be tasked with expedited permitting of Cal ISO-solicited peaker projects. At a minimum, the Energy Commission staff should track each of these projects as potential CEQA review and permitting case studies. If possible, given existing workload, the Energy Commission staff should also help to determine what types of technical assistance, if any, local jurisdictions may need in the areas of CEQA review, land-use permitting or building permitting.
- 6. Lastly, the Siting Committee recommends that the Energy Commission seek program funding from the Legislature to initiate a training and technical assistance program for assisting city and county building departments to perform plan checks and field inspections of new types of DG technology, such as PV, microturbines, and fuel cells.

Appendix A — Siting Committee Notice of Workshop with Scoping Questions

STATE OF CALIFORNIA ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

In the Matter of:)	Docket No. 99-DIST-GEN-(2)
Exploring Revisions to Current Interconnection)	
Rules Between Investor-owned and)	
Publicly-owned Utility Distribution Companies)	
And Distributed Generators)	
)	
Evaluating CEQA Procedures for Siting)	
Distributed Generation Facilities)	April 4, 2000

NOTICE OF SITING COMMITTEE WORKSHOP EVALUATING DISTRIBUTED GENERATION CEQA/PERMIT STREAMLINING

**Thursday, April 20, 2000
10 a.m. — 4 p.m.**

**California Energy Commission
1516 Ninth Street
Hearing Room A
Sacramento, California
(Wheelchair Accessible)**

The adoption of D.99-10-065 at the California Public Utilities Commission (CPUC) provided a procedural roadmap for addressing issues related to distributed generation and distribution competition. The decision was the result of collaborative efforts among the CPUC, the Energy Commission, and the Electricity Oversight Board (EOB). As part of the next steps in the process outlined in the CPUC's Order Instituting Rulemaking R.99-10-025, the Energy Commission will lead an investigation to develop recommendations on whether local government agencies can use a streamlined California Environmental Quality Act (CEQA) process for the siting of certain types of distributed generation technologies. It should be noted that distributed generation technologies are typically less than 20 MW, and therefore are not subject to the permitting authority of the Energy Commission (whose jurisdiction covers thermal power plants greater than 50 MW).

An Order Instituting Investigation was opened at the Energy Commission's November 3, 1999, business meeting to address interconnection rules (currently being addressed as a Phase 1

issue), as well as CEQA streamlining (now getting underway as a Phase 2 issue.) The main objective of this workshop and subsequent activity will be to produce a recommendation to the CPUC on whether certain types of distributed generation can qualify either for exemption from CEQA or, alternatively, for some form of streamlined CEQA review. In addition, this investigation will address whether and how the permitting process should be streamlined for distributed generation.

To begin the process of addressing these issues, the Energy Commission's Energy Facility Siting Committee (Commissioner Laurie, Presiding Member, and Commissioner Pernell, Associate Member) will hold a workshop to identify the major issues surrounding current environmental review and permitting practices and allow interested parties an opportunity to comment on several topic areas. This workshop notice is being mailed to the CPUC's R.99-10-025 service list, as well as to the state's air pollution control officers, planning managers, and engineering managers, city, county, and council of government planners, local building departments, and state agencies such as the CARB, Fire Marshall's Office, Resources Agency, California Environmental Protection Agency, and the Office of Planning and Research.

While an agenda is not attached to this notice, we expect the first part of the workshop to include presentations by Energy Commission and the CARB staff, as well as presentations by distributed generation developers and utilities that have sought to permit distributed generators. The afternoon will focus on receiving feedback from those agencies that grant permits, as well as a discussion of the next steps to be taken. An agenda will be posted on the Commission's Web site approximately one week before the workshop. In order to identify the issues for discussion during this workshop and finalize the agenda, the Energy Commission requests that parties file written comments addressing any of the attached questions. Written comments should be received by the close of business on April 14, 2000. Any written materials should be addressed to the following:

California Energy Commission
Dockets Unit
1516 Ninth Street, MS-4
Sacramento, CA 95814

Docket Number: 99-DIST-GEN-(2)

Following the workshop, the Committee will consider recommendations for Energy Commission action. If you have questions regarding this notice, please contact Judy Grau by telephone at (916) 654-4206 or by e-mail at jgrau@energy.state.ca.us. If you want information about or assistance in participating in this or other Energy Commission proceedings, please contact Roberta Mendonca, the Commission's Public Adviser, by telephone at (916) 654-4489, toll-free in California at (800) 822-6228, or by e-mail at pao@energy.state.ca.us. If you require special accommodation at the workshop, please contact Robert Sifuentes by telephone at (916) 654-5004 or by e-mail at rsifuent@energy.state.ca.us at least five days before the workshop.

QUESTIONS FOR THE SITING COMMITTEE WORKSHOP EVALUATING DISTRIBUTED GENERATION CEQA/PERMIT STREAMLINING

All parties planning to file responses to these questions are encouraged to send an original and 10 sets of written comments to the Energy Commission Docket Office by April 14, 2000. In addition to answering the questions, workshop participants are encouraged to provide a detailed rationale for their responses.

I. Scope of technologies

- A. Which distributed generation (DG) technologies are most likely to be commercially available/encountered by permitting agencies first? What are the permitting issues associated with those technologies?
- B. What size range of generating technologies should be considered eligible for permit streamlining?
- C. Should electricity storage technologies be considered also? If so, what types should be considered?
- D. Are the environmental impacts of all DG technologies currently sufficiently understood? If not, what additional information should be gathered or research undertaken? Are performance characteristics (e.g., emissions factors, cost, output rating, etc.) currently available? Who should provide this information?
- E. What are the barriers (e.g., technological, cost, etc.) that are impeding DG permitting? What are the permitting barriers that are impeding DG deployment?

II. Information and training to be provided to government agencies

- A. What information and training should be provided to fire departments and emergency response personnel? Who should provide this information?
- B. What information and training should be provided to local building officials? Who should provide this information?
- C. What information should be provided to air quality districts? Who should provide this information?
- D. What information should be provided to the Energy Commission under its generator data regulations? (E.g., fuel type, capacity rating, location, etc.) Who should provide this information?

III. Procedural

- A. What is the minimum recommendation that should come out from this investigation? What is the maximum that should be expected to be accomplished in the next several months? (E.g., proposed state legislation, proposals for uniform local regulations, model procedures that may be adopted by local jurisdictions, statement of the issues with several recommendations.)

- B. Can permit streamlining be addressed in a technology neutral manner? If so, give examples of how. If not, please describe how priorities can be established fairly.
- C. What is the best approach to develop permit streamlining recommendations in this proceeding?
- D. Should working groups be formed to address the CEQA/permit streamlining issue? If so, how many, and how should the work be divided among several working groups?

IV. CEQA Compliance

- A. Under what circumstances would DG projects be categorically exempt from CEQA? Could this list of categorical exemptions be expanded to include other types of DG projects? Or could it be modified to consolidate all of the DG exemptions in one place? If the list of CEQA categorical exemptions is expanded, how will the current local permitting process adequately deal with these newly CEQA-exempt projects?
- B. What mitigation measures would each DG project typically be required to adopt?
- C. Who will be the lead (CEQA-process) agency for DG projects? If the lead is a local government, which state and federal agencies will be responsible agencies, providing input to the lead agency?
- D. What should the Energy Commission (and/or other state agencies) do to help with the lead agency's analysis of environmental impacts?
- E. Could a program environmental impact report (EIR), including cumulative impact analysis, be prepared so that it can be tiered to support individual DG project EIRs?

Appendix B — Notice of Siting Committee Workshop Evaluating Distributed Generation CEQA/Permit Streamlining

Dear Workshop Invitee:

Enclosed is a notice announcing a workshop that will be hosted by the California Energy Commission's Energy Facility Siting Committee on Thursday, April 20. As described in the notice, the Energy Commission has been charged with leading an investigation into whether local government agencies can use a streamlined California Environmental Quality Act (CEQA) process for siting certain types of distributed generation technologies. The list of people receiving this workshop notice has been expanded beyond the formal California Public Utilities Commission (CPUC) R.99-10-025 service list to include California's air pollution control officers, planning managers and engineering managers, city, county, and council of government planners, local building officials, and affected state agencies. In this manner, the Energy Commission is seeking to broaden participation in its investigation by including those entities who may be affected by the desire of developers and others to site, and receive permits for, distributed generation projects.

What is distributed generation?

Distributed generation (DG) refers to relatively small (from a few kilowatts to about 20 megawatts) electric generating and storage technologies for stationary applications. They may be owned by either electric or gas utilities, or by the state's industrial, commercial, institutional, and residential consumers. They include generating technologies such as diesel engines, fuel cells, small gas turbines, microturbines, solar photovoltaics, wind, and natural gas engines, as well as electric storage technologies such as batteries, flywheels, and superconducting magnetic energy storage.

Several factors have contributed to the increasing interest in DG over the last several years. First, utilities are increasingly interested in pursuing more reliable, cost-effective, and environmentally acceptable means to serve their customers. DG has been cited as one means of meeting increasing local loads while avoiding the impacts associated with upgrading utility transmission and distribution systems. Second, industrial, commercial, institutional, and residential customers are increasingly interested in maintaining a highly reliable source of high-quality power to meet the needs of sensitive electronic equipment. Third, while some of the DG technologies noted above have been in use for decades, recent research and development has resulted in new technologies which show promise in providing customers with more options for customizing their electric service to meet their needs.

Because of this interest in DG, along with the recognition that there are numerous regulatory obstacles to overcome in order to create an environment in which DG can compete effectively in the electricity industry, the CPUC has opened this proceeding, in cooperation with the Energy Commission, to examine the major issues and provide recommendations for addressing them.

These issues include distribution system planning and operation, rate design, ownership of DG, interconnection of DG with the utility, and the issue at hand on CEQA and permit streamlining.

Why should I be interested in this workshop?

As the major regulatory issues are resolved, it is possible that there could be a proliferation of these projects seeking permits. DG is typically viewed as a supplemental technology to the large, central station generating facilities permitted by the Energy Commission (which certifies thermal power plants greater than 50 MW). Thus, while DG will not totally replace existing and proposed power plants in state, it could displace perhaps 10 to 30 percent of future central station generation. Also, while new large central station generating facilities tend to be sited near major transmission lines and away from large population centers, by its very definition DG is distributed among population centers to meet local needs.

Many local agencies may be unfamiliar with the environmental and performance attributes of some of the DG technologies, as well as the possible implications of planning for, and permitting, a large number of DG projects. This workshop will provide an opportunity for you to learn more about how DG may affect you, and give you an opportunity to share your experiences evaluating or permitting DG projects, or to express your concerns.

Where can I get more information on DG?

The Energy Commission provided an all-day training seminar on DG (also called distributed energy resources) last April. The materials are available in PowerPoint and Acrobat PDF versions on the Energy Commission's distributed generation Web site at www.energy.ca.gov/distgen/documents/index.html . Scroll down to the bottom of the screen, and click on either the Power Point or Acrobat PDF version of the morning presentation entitled Technologies or the afternoon presentation entitled Deployment/Case Studies/Agency Efforts.

Where can I get more information on the Energy Commission and CPUC proceedings?

Information on the Energy Commission's Order Instituting Investigation (which feeds into the CPUC's Order Instituting Rulemaking) can be found on the Energy Commission's Web site at www.energy.ca.gov/distgen/index.html . From there you can obtain Commission notices, documents, and filings for this proceeding.

Information on the CPUC's Rulemaking R.99-10-025 can be found at the CPUC's Web site at www.cpuc.ca.gov/dg-r9910025/index.htm . From there, click on Selected Decisions, Rulings in R.99-10-025 to view the October 21, 1999 Order Instituting Rulemaking, which establishes the roadmap for addressing DG issues in the CPUC and Energy Commission forums.

How can I be placed on the CPUC s service list?

Parties interested in being placed on the CPUC s Information Only service list should send a letter to the CPUC s Process Office at 505 Van Ness Avenue, San Francisco, CA 94102, asking that they be added to the R.99-10-025 service list. Parties on the Information Only service list will receive only those documents that originate from the CPUC, such as notices, rulings, and decisions.

If you would like to change your status from Information Only to Interested Party (which means that you plan to participate actively through sponsoring testimony, cross-examining witnesses, etc.), please contact CPUC Administrative Law Judge Michelle Cooke directly by phone at (415) 703-2637.

How can I participate in the April 20 workshop?

As described in the workshop notice, you may submit written comments to the Energy Commission in advance of the workshop. Any comments received prior to April 18 will be made available to all workshop attendees.

You are also welcome to attend the workshop in person and participate either formally by providing oral comments during the scheduled time, or informally during the open discussion period.

The Energy Commission will likely broadcast the workshop over the Internet using RealAudio. Please see the Energy Commission s Web Site at www.energy.ca.gov/RealAudio.

Appendix C — Summary of April 20 Siting Committee Workshop

This appendix summarizes workshop comments. This includes oral presentations, docketed written comments, other written and oral comments received by the Energy Commission staff, and public comments. Additionally, potential next steps discussed at the workshop are summarized. Transcripts of the workshop, along with most of the presenters' material, have been posted on the Energy Commission's Web Site at www.energy.ca.gov/distgen/documents/index.html. The views and conclusions provided in this section are those of the speaker.

Oral Presentations

Oral presenters included representatives from both the regulators and the regulated, as well as public members. These included government agency staff and management, an environmental advocacy organization, project development interests, a manufacturer of distributed generation technology, and a utility representative.

Judy Grau of the Energy Commission staff gave an overview of distributed generation technologies, grouping them into three categories: fossil fuel-based, non-fossil fuel-based, and distributed storage technologies. She discussed commercial availability, size ranges, costs, emissions, typical fuels, and typical duty cycles.

Shirley Rivera of Resource Catalysts, an environmental consulting organization, gave an overview of project approval process issues. This included the types of environmental and siting considerations that are addressed by both planning and permitting agencies, which have different perspectives and responsibilities. However, a number of federal, state, local, city, and county agencies may be involved in both processes.

Ms. Rivera pointed out that what is defined as a project under CEQA may or may not be the same as what is defined as a project when dealing with air or water permits. Commissioner Laurie asked at what point the placement of a distributed generation facility creates the need for an independent CEQA examination; this was not resolved during the workshop.³⁴ However, Mr. Mohsen Nazemi of the South Coast Air Quality Management District noted discretionary decisions that a permitting agency is required to make, and subject to the CEQA process.

Ms. Rivera suggested that current permit process could be streamlined by identifying the technology-specific issues early and then developing policies and standards to resolve them that would allow distributed generation projects to be deployed with significantly less time and expense and with greater certainty.

³⁴ Section IV of this report addresses Commissioner Laurie's question.

Commissioner Pernell reiterated that the purpose of the workshop was not to streamline the CEQA regulations, but to examine ways to provide the information needed to streamline the CEQA process as it relates to fulfilling the current regulations. He suggested the creation of a best practices list as it relates to licensing the various distributed generation technologies.

Jeff Wilson of the CARB staff discussed integrating the deployment of distributed generation technologies into the air quality management planning process, based on the results of a study by Distributed Utility Associates (DUA), under contract to CARB. He noted that distributed generation would have an impact on the annual emissions inventory, depending on the number and type of units deployed. It would also change the population's exposure to harmful pollutants: of particular concern are diesel—fueled generators, due to the toxic nature of diesel particulate matter. In addition, there is concern that existing diesel generators permitted for emergency use only (or exempt from permits), with few emissions controls, might be expected to operate on high electricity use days when temperatures are usually high and air quality is poor. The results of the DUA study suggest that this concern may be valid. Of all of the potential distributed generation technologies considered to meet new peak load in the year 2002, diesels have the highest market potential based on economics, with the highest corresponding increase of emissions. The report should be available to the public in August 2000. Mr. Wilson noted that there are many caveats and limiting assumptions in the study, and that follow-up studies would be needed before drawing any firm conclusions.

Winston Potts of the CARB indicated that the agency is currently undergoing a regulatory needs assessment effort for diesel engines. This effort has been initiated to examine the need for air quality regulations on both existing stationary diesel engines, as well as finalizing the permitting guidelines for new stationary diesel engines. Mr. Potts anticipates regulatory action within the next two to three years.

Steven Greenberg of Intergy Power, a project developer, shared his experiences with, and lessons learned from, siting and permitting distributed generation, particularly with respect to the Pleasanton Power Park project located in the San Francisco Bay Area. He noted that the negative declaration³⁵ prepared by the City of Pleasanton assumed the use of distributed generation technologies. He indicated that the planning process was exceedingly slow due to the lack of codes and guidance for the local permitting agencies, requiring an educational effort on the part of the developer to resolve. He recommended the following: the creation of industry standards for specific technology groups, state and local standards, education programs for regulatory staff, utility staff, contractors, and customers, and an Energy Commission guidebook on distributed generation for building permit departments. Mr. Greenberg also envisioned the potential for the regulatory process to become obsolete because of the fast pace of change in technologies.

³⁵ The type of environmental document prepared by a public agency when the proposed project has been determined to have no significant environmental impacts.

Kevin Duggan of Capstone Turbine, a manufacturer of microturbines, noted that their 30 kW microturbine product does not generally come under any regulatory or permitting requirements. Capstone strives to minimize customization and to meet various customer requirements by providing assurance in the form of UL certification. He noted that Capstone would like to know what standards are required in California (e.g., largest footprint that would not result in a land use issue, emissions limits, etc.). By specifying the requirements the product must satisfy, equipment manufacturers can design and build a product to meet those standards. These standards could then be used as screens, with those products passing the screens being exempt from a full permitting process.

David Rienhart of the Sacramento Municipal Utility District (SMUD) spoke about his experiences working with various planning and permitting agencies as part of SMUD's PV programs. They have developed a standardized permit submittal package that has eased the process for both the planning agencies and themselves. He stressed the importance of educating the appropriate local agencies when introducing new technologies and addressing issues of concern to them.

Chris Kinne of the California Environmental Protection Agency (Cal EPA) manages the state's 13 permit assistance centers, which were formed to reduce the complexity of the regulatory process for California businesses, particularly small businesses with fewer than 50 employees. She stressed the importance of project proponents being able to identify up front which agency contacts they need: the permit assistance centers can help identify the key contacts. Cal EPA has created an interactive web site called CalGold < www.calgold.ca.gov >. By typing in the project location and business type, a report is generated which notes all of the city, county, regional, state, and federal approvals which would be required. It also links with air districts and other permitting agencies' web sites to the extent possible and seeks to provide applications online. She noted that there is currently no business type for distributed generation, but Cal EPA would consider working with the Energy Commission and/or CPUC as needed to update CalEPA's information.

Dr. Ken Lim of the Bay Area Air Quality Management District (BAAQMD) discussed both central plant and distributed generation related issues. Dr. Lim noted that his district has implemented a best available retrofit control technology (BARCT) rule for existing central station power plants. The limit decreases each year, with an ultimate system average limit of 15 ppm of NO_x (a 90 percent reduction from baseline historical values). Thus, any comparison of distributed generation emissions to the existing system must take into account the system-average improvement occurring each year from reductions in emissions of existing central power plant sources.

Dr. Lim reiterated his district's concern that internal combustion engines pose a great cumulative potential air quality problem in the region. He noted that the district does permit diesel engines, subject to appropriate constraints.

Dr. Lim said that manufacturers would like to have uniform best available control technology (BACT) standards throughout California, which his district is pursuing. He noted the difficulty in setting one standard that is strict enough to generate support across all air districts while not being so stringent that it makes the project uneconomic. He also sees the need for alternative processes, in which an applicant could appeal to an air district in cases where there are overriding considerations (e.g., if BACT requires natural gas, but it is not available in that location). Another consideration is to set an output-based standard, in terms of pounds of pollution per kilowatt-hour (or per megawatt-hour) of electricity generated, rather than pounds per hour.

Dr. Lim also identified equipment pre-certification as a potential streamlining mechanism. Pre-certification by the permit agency would accelerate the permit process. A technology could go through a generic CEQA review process and study, and any future units of the same type would only have to address site-specific local impacts. Dr. Lim noted that the key to equipment pre-certification is prior agreement on a uniform BACT standard by the air districts and the CARB.

At present, however, initial studies, negative declarations, and/or environmental impact reports are often necessary for some new technologies for which emissions are not well-quantified, or for which there is a local impact, especially health impacts due to toxic emissions. Dr. Lim encouraged developers and applicants to hold pre-meetings with a district to review its rules and regulations, and to discuss the characteristics of the proposed technology.

Additional guidance can be found on the Bay Area AQMD Web Site <www.baaqmd.gov>, which posts technology-specific BACT and emission offset requirements. Where there is no prior BACT determination, there is a BACT workbook, which provides a methodology for developing the appropriate BACT level. In addition, the district helps small businesses (defined as emitting fewer than 50 tons per year of criteria pollutants) find emission offsets, where needed, to satisfy regulatory requirements.

The district also has an accelerated permit process for facilities that do not have significant toxic emissions and emit fewer than 10 pounds of criteria pollutants per day. The Bay Area AQMD Web Site includes a list of toxic compounds and the emissions levels that trigger regulatory requirements. He noted that they have had a great deal of success with this accelerated permit process program.

Mr. Greenberg inquired about the possibility of the district implementing a measure in which new emissions credits could be generated by energy efficiency or no-emissions technologies such as solar photovoltaics. Dr. Lim replied that before an emission reduction credit can be granted, the district must demonstrate that the reduction is real, quantifiable, and permanent. Mr. Greenberg suggested to the Energy Commission that the state pursue the idea of bringing all of the air districts together under one umbrella and allowing that sort of emission reduction credit to occur.

Elaborating further on the status of the district's pre-certification program, Dr. Lim noted that their board has approved such a program, but have not had any inquiries about it yet. For distributed generation technologies that could be treated essentially as appliances, pre-certification could be done at the manufacturer level for specific models.

Sheryl Carter of the Natural Resources Defense Council, an environmental advocacy organization, stressed the importance of disseminating information and of interagency cooperation in an effort to facilitate deployment of appropriate distributed generation technologies. She noted that distributed generation cannot uniformly be considered clean, as the technologies range from zero-emission photovoltaics to internal combustion engines and combustion turbines that emit criteria pollutants and possibly toxic emissions. As such, a categorical exemption from CEQA for all distributed generation technologies is inappropriate.

Ms. Carter presented a table which compared the ranges of costs, thermal efficiency, and the uncontrolled³⁶ emissions of various distributed generation technologies and fuels expected to be available by 2003 with those of a new central-station combined cycle facility with appropriate controls. She encourages the use of measures to reduce those emissions, such as catalysts or post-combustion controls, use of waste heat, and routine maintenance.

She recommended that the Energy Commission and/or the CARB, possibly with assistance from CADER, initiate a collaborative effort among industry, agencies, environmental groups, and consumers to address the technical and policy issues regarding performance standards, testing, and labeling requirements. She also recommended that the Energy Commission could extend its building code responsibility to cover the energy use of distributed generation, and develop building codes to encourage cogeneration (also known as combined heat and power) applications. The Energy Commission could also provide local agencies with guidance and expertise via guidance documents or other means. The appropriate air agencies need to develop technical standards.

Docketed Written Comments

Written comments were received from five entities: Monterey Bay Unified Air Pollution Control District (Monterey Bay UAPCD), San Joaquin Valley Unified Air Pollution Control District (San Joaquin Valley UAPCD), Bay Area Air Quality Management District (Bay Area AQMD), San Luis Obispo Air Pollution Control District (San Luis Obispo APCD), and Solar Development Cooperative (SDC).

Monterey Bay UAPCD, San Joaquin Valley UAPCD and Bay Area AQMD expressed the concern that existing emergency generators may be the first distributed generation to proliferate because they are already in place and could require little modification to increase their usage from

³⁶ Distributed generation emissions are typically uncontrolled because of the current lack of regulations for generators of the sizes presented.

emergency backup to baseload or peak load operation. These units are either not currently permitted, or have permits for limited operation that do not require BACT or emission offsets. In particular, the designation of diesel particulate matter as a toxic air contaminant is an additional concern which must be addressed before such units could be considered to operate other than under emergency conditions. Monterey Bay UAPCD does not believe that diesel-fired distributed generation is a candidate for a categorical exemption from CEQA. He noted that a program EIR, prepared in cooperation with air districts, would be helpful in addressing deployment issues specific to distributed generation technologies.

Bay Area AQMD's comments echoed Monterey Bay UAPCD's concerns about the potential proliferation of diesel-fueled distributed generation and the potential for significant adverse health effects. However, Bay Area AQMD also noted that distributed generation technologies such as solar and fuel cells could benefit air quality because they are zero or low emissions.

San Luis Obispo APCD expressed concern about the lack of time given to respond to the Energy Commission workshop scoping questions and considered the lack of time to be inappropriate given the importance of the workshop issues. It suggested that an additional workshop be scheduled, with at least 30 days' notice to allow for proper response. It also echoed the concern expressed by the other air districts regarding the potential proliferation of diesel-fueled and other fossil fuel-based distributed generators that could cause significant health risks (in the case of diesel) and degrade air quality, particularly because distributed generators would be located close to population centers and have near-surface release points (due to lower stack heights compared to central-station facilities). As a result, San Luis Obispo APCD does not believe it is appropriate to use existing streamlined CEQA and permit processes for fossil fuel-based technologies, although it sees merit in evaluating the use of streamlining options for renewable energy technologies.

Solar Development Cooperative (SDC) agreed with San Luis Obispo APCD that small renewable energy systems are the best candidates for using streamlined CEQA processes, while fossil fuel-based systems are inappropriate for such consideration. In addition, distributed storage systems that do not involve moving parts or hazardous materials should be considered for expedited permitting. Because distributed generation is sited close to population centers, it is important to address air quality and public health issues, as well as the potential for noise, adverse aesthetics, environmental justice, and community safety.

SDC noted that while there is substantial information available about the environmental impacts of distributed generation technologies, it is not sufficiently organized, considered, and integrated into deployment decisions. SDC suggests that all government agencies should have a standard manual that contains information pertinent to each agency. This should increase teamwork and efficiency as agencies will be aware of overlapping responsibilities and can coordinate accordingly.

SDC believes the government should provide technology information booklets to fire departments and emergency personnel that include step-by-step guidance to respond to emergencies. Local building officials need to understand the environmental impacts of distributed generation technologies on the natural environment, and design issues including roof load-bearing, aesthetics, noise pollution, and visual blight.

SDC sees value in using a working group process to address CEQA and permit streamlining, as long as the groups are not dominated by fossil fuel proponents and the working groups seek objectivity in compiling and analyzing referenced data. In addition, consumer input should be sought throughout the process. The Energy Commission should include parties representing small businesses and should encourage financial support for small businesses to participate effectively in the workshops. Local government officials, professionals in architecture, urban planning and non-energy-related industries need to be included as either consultants to, or as participants in, the working group process.

Other Written and Oral Comments Received by the Energy Commission Staff

Eric Wong of Caterpillar Inc., an engine manufacturer, submitted comments to the Energy Commission staff, Judy Grau, via email on April 19, 2000. As part of the next steps, he suggested that staff consider using a private/public group to assist with this effort or to provide outside counsel. Such a group should be charged with specific tasks, rather than simply be an advisory group.

On April 17, 2000, Mignon Marks of the Energy Commission staff spoke with Ms. Pat Eklund, councilmember for the City of Novato and former chair of the League of California Cities Environmental Quality Policy Committee. Ms. Eklund's suggestions for the types of support local governments could use include the following: (1) provide model permits, with conditions of approval, (2) recommend the type of environmental document needed, and (3) provide technical assistance to local governments, such as on-site evaluation during the permitting process. She also had several suggestions for how to reach local governments, including the following: (1) Get on the agendas of League of California Cities division meetings, and county-level mayor and councilmember department meetings (in particular, attend the Executive Conference of the League's Mayors and Councilmembers Department, set for July), (2) Post model permits and other information on the Energy Commission's Web Site, and (3) Offer on-site technical assistance in building permit streamlining.

Public Comments

Four members of the public contributed comments at the workshop.

Eric Wong of Caterpillar thanked the Energy Commission, CPUC, CARB and air districts for pursuing permit streamlining for distributed generation. He cited four reasons to continue the effort: (1) streamlining should enable manufacturers to avoid the costs of tailoring their products

to meet different codes and standards throughout the state, (2) project developers can avoid the costs of attending hearings or preparing testimony supporting an individual distributed generation project, (3) communities can avoid environmental and public health and safety impacts associated with distributed generation projects (Eric encouraged the Energy Commission, CPUC and CARB to coordinate handling environmental justice issues.), and (4) regulators can develop better public policies.

He raised new concerns about air pollution offset availability and cost, the potential that offset owners can exert market power, and the cumulative air quality impacts from many distributed generation projects aggregating in an area over time. Lastly, he reiterated the need for pre-certification programs and uniform standards, and suggested the Energy Commission monitor the City of Irvine's effort to streamline its permitting process for distributed generation/combined heat and power (i.e., cogeneration) projects³⁷ and contribute research and development (R&D) funding to a U.S. Department of Energy initiative to lower emissions from advanced reciprocating engines.

As a follow-up to Commission Laurie's question about the need for CEQA review, **Jerry Steele** of the Monterey Bay Unified Air Pollution Control District stated that his district's legal counsel and planning supervisor have determined that all operating permits issued by the district are discretionary and, therefore, distributed generation projects, which require air permits (i.e., whose emissions exceed defined levels of significance) will require CEQA review. Other air districts may interpret CEQA's requirements differently. He expressed his district's concern regarding health risks from converting existing diesel generators now reserved for emergency use to longer operation as distributed generation units.

Mohsen Nazemi, Assistant Deputy Executive Officer of the South Coast Air Quality Management District (South Coast AQMD), summarized his district's efforts over the past decade to address air pollution from utility boilers and to advance cleaner technologies, such as fuel cells. He emphasized his district's concern regarding the cancer-causing effects of diesel emissions and described new regulatory actions recently taken by the district to further limit public exposure to diesel emissions, including from heavy-duty diesel fleets. Mr. Nazemi said the district may not permit diesel generators for emergency use in the future. Distributed generation units fueled with natural gas may be cleaner than diesel generators, but if many small distributed generation units are installed in the South Coast Air Basin, the units could emit more pollution than one, large natural gas fired power plant producing the same amount of electricity.

South Coast AQMD has already implemented a number of permit streamlining actions on its own. These actions include an engine pre-certification program, which exempts certified engines from air permitting and CEQA review.

³⁷ The Energy Commission is already co-funding this project with the U.S. Department of Energy.

South Coast AQMD does not support a categorical exemption for all distributed generation, but supports the idea of preparing a programmatic EIR.

Eileen Smith of SDC advocated greater use of zero-emission technologies for generating electricity. She expressed concern that their commercialization was being suppressed by oil cartels. In addition, she disagreed with characterizing diesel generators as the lowest-cost technology. A global view would assess diesel generators costs to public health, the environment and the quality of life.

She also expressed concern that permit streamlining efforts which do not recognize technology-specific characteristics could lead to high-polluting generators being pushed through a local permitting process. Furthermore, if any distributed generation systems are found to have been installed without first having the required permits, she felt they should be disconnected, not just fined.

Discussion of Next Steps

Judy Grau summarized key points from the presentations and public comments. A frequent comment from workshop participants was that not all distributed generation technologies should receive equal regulatory treatment. Renewable energy and fuel cells were identified as preferred technologies by many workshop attendees because they have no or low emissions. In contrast, all who spoke on the topic felt that diesel generators deserve significantly greater regulatory scrutiny if owners seek to increase their use or deploy new units.

The distributed generation industry speakers favored inter-government and industry efforts to adopt standards and codes, which would apply in multiple jurisdictions, so that manufacturers can avoid building custom equipment and, if possible, can pre-certify their equipment with air districts.

Favored actions by state government included providing guidance documents and a program or master EIR. Commissioner Laurie asked the staff to contact local jurisdictions, (whose absence at the workshop was noted) and ask them what kind of large-scale, generic environmental analysis should be undertaken if the State of California were to pursue preparing a program or master EIR for them. He extended the workshop proceedings by two weeks (to May 5) to receive additional written comments on this and other relevant issues.

Judy Grau said the next steps would be to prepare a plan of action, which includes conducting more outreach to local jurisdictions. The purpose of this outreach would be to identify the needs of local jurisdictions and then prepare and distribute information to them.

Appendix D — Summary of the September 7 Committee Hearing

This appendix summarizes hearing comments. This includes oral presentations, public comment and docketed written comments.

Oral Presentations

Chris Tooker of the Energy Commission staff summarized the contents of the *Workshop Report*, which included concerns raised by workshop participants and information collect from the Commission staff about the CEQA review process and three permitting processes relevant to DG projects. For the CEQA review process and for each of the three permitting processes, the Workshop Report addressed: when the process applies to a DG project, opportunities for exemption from the process, and opportunities to streamline the process.

Dorothy Rothrock of the California Manufacturers and Technology Association discussed SB 1298, which was introduced and approved this legislative session, to develop uniform emission standards and a certification program for DG equipment. The CARB will determine the initial emission standards, which are defined as best performance achieved in practice by the technologies. Gradually, these standards will be lowered so that DG equipment must become as clean as the Best Available Control Technology standards imposed on central station power plants. An important distinction, however, is that the DG emission standards will be expressed in pounds per MWhr, which is intended to recognize the energy performance of the technology. The standards will apply to the smallest DG equipment which may currently be exempt from air district permitting.

Richard Corey of the CARB followed up Ms. Rothrock s presentation on SB 1298 with information on the CARB s plans to initiate a stakeholder process to design SB 1298 s DG equipment certification program. He also reported on the CARB s activities to characterize emissions and potential control opportunities for various types of DG. One of the CARB s major focuses has been on reducing toxic air contaminants and other emissions from diesel generators. He also mentioned that the CARB issued a guidance document to help local air districts in making BACT determinations.

Seyed Sadredin of the San Joaquin Valley APCD expressed his support for air permit streamlining, including the upcoming SB 1298 certification program.

He then expressed concern about the Workshop Report s recommendation to expand the current CEQA exemption for cogeneration to other forms of DG. He felt that CEQA enables air districts to address the cumulative air quality impacts of many, small DG units, including those units which are exempt from the air district s permit requirements. Most districts do not have the authority to impose controls on an individual source, based on concerns about potential cumulative impacts.

He also clarified for Mr. Tooker that his air district is permitting diesel engines which are greater than 50 horsepower. The risk analysis conducted to receive the permit is showing the need to limit hours of operation for these engines to 50 hours per year, unless they include add-on controls or unless they will be operated in remote areas, away from sensitive receptors.

Mohsen Nazemi from the South Coast Air Quality Management District (SCAQMD) spoke about the problem of NOx emissions from emergency diesel generators. Without those controls, they can be 200 times more polluting. Even *with* BACT emission controls, they still emit 20 times more NOx than central station power plants.

Small natural gas engines likely emit five to six times more NOx than central station power plants.

Mr. Nazemi raised another concern about small engines: they create greater ground-level air quality impacts because their emission stacks are shorter and because the residents and businesses are likely to be closer to these sources. As a result, they pose a greater health risk than central station power plants. SCAQMD's air permit regulations, therefore, require that diesel engines must meet the same BACT standards as natural gas engines.

SCAQMD is particularly concerned about the toxic air contaminants from diesel engines because cancer risk levels in the Los Angeles Basin are 1,400 in a million and are due primarily to diesel particulates.

He closed his comments by expressing support for air permit streamlining programs and was especially supportive of preparing a program EIR to help local jurisdictions evaluate individual projects more easily.

Eileen Smith of the Solar Development Cooperative voiced concern that electric capacity shortages, such as San Diego is experiencing now, might cause relaxed environmental regulation of highly polluting, fossil-fired DG. She expressed particular concern that diesel engines might be allowed to exceed emission limits set for remote locations. She did not support the provisions of SB 1298, which allow DG units to emit more air pollution than central station power plants because of their proximity to populations.

She urged the Energy Commission to support deployment of non-emission DG technologies and California Solar Industries Association's proposal to the CPUC's proceedings to deploy photovoltaics to reduce summer air conditioning demand. She also urged the Energy Commission to work with the CPUC on developing a methodology for evaluating the cost effectiveness of different types of DG, which quantifies their air quality impacts and benefits (if non-emitting). She reiterated her comments from the April Workshop that diesel engines are not the least cost technology because their environmental impacts had not been included in the cost calculation.

Ms. Smith recommended environmental impact reports be prepared for each DG project, so that cumulative impacts may be analyzed.

Shirley Rivera of Resource Catalysts updated the Committee on the status of a 49.5 MW power plant, which was proposed to be installed in the Chula Vista area. The environmental document and permit are likely to be approved by the local jurisdiction in late September. The project team did not have problems with the CEQA review process because it worked closely to educate the local jurisdiction staff about the projects potential impacts and agreed to include mitigation measures.

Larry Allen with the San Luis Obispo County Air Pollution Control District expressed concern that certain types of DG equipment can create a greater public health risk than central station power plants because its exhaust is emitted at ground level and is installed closer to populations. He wanted air districts to continue to evaluate air quality impacts of DG, particularly diesel equipment, on a case-by-case basis. He also supported imposing stringent emission controls on DG equipment, even if those controls are more expensive to install at a smaller scale. He questioned the need for policies to expedite siting of higher-polluting DG technology, when many central station power plants may soon be licensed through the Energy Commission's siting process and built.

He supported the certification program created by SB 1298 because it sets standards for equipment which is now exempt from air district permitting requirements.

Lastly, he expressed concern with the apparent abandonment of government and utility support for demand-side management and conservation programs, which he stated deliver the quickest and least expensive energy resources.

Sheryl Carter of the Natural Resources Defense Council (NRDC) affirmed Mr. Allen's comments about energy efficiency and mentioned two bills awaiting the Governor's approval for funding energy efficiency programs for the next ten years.

She also explained that NRDC supported SB 1298 because it will cover DG technologies not currently covered by any air permitting requirements. The emission limits will be stringent enough to keep the dirtiest stuff from being sold and used in California and will soon require the same emission levels as those imposed on central station power plants. Furthermore, SB 1298 does not limit air districts' ability to evaluate cumulative impacts or to impose more stringent standards.

Mr. Matt Tennis spoke on behalf of the Agricultural Energy Consumers Association. He expressed Central Valley growers' concerns about electricity capacity shortages, rolling blackouts and electric prices after the rate freeze is lifted. Public attention may be focused now on San Diego, but other areas of the state served by IOUs are also important to consider.

Chris Cooley spoke on behalf of Onsite. He recalled the comment made by Commissioner Pernell at the April 20 workshop: ...the purpose of the workshop was not to streamline the CEQA regulations, but to examine ways to provide the information needed to streamline the CEQA process as it relates to fulfilling the current regulations.³⁸ He suggested that a uniform, electronic permit application form might be developed, which captures all information needed for each jurisdiction. A similar electronic application was discussed in the interconnection workshops of the OII.

Ms. Shirley Rivera of Resource Catalysts, Inc. responded to a question posed by Ms. Ellen Townsend-Smith regarding air district efforts to evaluate possible controls on diesel engines. She clarified that if emergency diesel generators operate during peak hours, then these engines would be stepping outside of the boundaries of the definition of what is an emergency generator. To operate legally during peak hours, these units would have to obtain a permit that allows for an increase in the hours of operation. Through the air-permitting process, the evaluation for control technology would occur. Ms. Rivera also noted, however, that the best available control technology for particulates would not create a reduction of the other emission types, such as NOx, VOCs, CO and SOx.

Tim Owens with the City of San Diego discussed his involvement as a Senior Electric Inspector with two DG projects installed by San Diego Gas and Electric. These sites, one 50kW, one 100kW are exempt from obtaining electric permits, since they will be owned and operated by the utility. Should the property owners choose to take over operation and ownership of these demonstration fuel cells, they must go through all the normal steps for permitting.

Mr. Owens then described the electrical differences between an emergency generator and a standard DG. The emergency generator has no direct connection to the utility grid. Its operation is controlled by a transfer switch, that turns on automatically whenever the power grid goes down. Some facilities in San Diego are connecting their diesel emergency generators directly to non-emergency loads and running during the day. He had also seen a number of mobile generators sitting on semi-trailers at facilities. He said because these were mobile, they escaped the normal permitting processes.

Summary of Written Comments

Michael D. Montoya of Southern California Edison (SCE) said that SCE supports local jurisdictions retaining siting authority for DG projects. It does not want existing environmental review processes circumvented for DG development. If the Energy Commission pursues an educational program with local government policy makers and regulatory staffs, SCE would like to participate in developing and delivering that educational program.

³⁸ Workshop Report on Distributed Generation CEQA and Permit Streamlining, California Energy Commission, June 2000, Appendix C, page C-1.

In addition, SCE provided the following comments regarding the Workshop Report. It doubted that a Program or Master EIR would be beneficial because such reviews must be technology, equipment or facility specific to be effective. Some battery storage technologies may emit toxic contaminants. CEQA categorical exemptions do not apply when new electric generation is added to electrical substations because this is a new use of the site. The CEQA review process could be streamlined by designating air districts as the lead agencies over DG projects with any sort of emissions. Without such a process change, the Workshop Report does not contain any recommendations, which would streamline the CEQA process.

Terri Shirhall of the City of Roseville's Community Development Department suggested that the Energy Commission provide information, possibly in a checklist format, which identifies the impact characteristics of specific types of DG facilities and which identifies standard mitigation measures. Developing standard mitigation measures may also help air districts, by addressing their concerns about air quality cumulative impacts.

Allowing for a CEQA categorical exemption for additional DG facilities would be a productive method of streamlining.

It is unlikely that the cumulative impacts of insignificant DG projects might cause a local jurisdiction to require a full EIR for an individual project, which has small incremental impacts.

Kevin Bryant of the City of Alameda Planning Department opined that two strategies identified in the Workshop Report would be most beneficial to his jurisdiction in expediting the permit process for DG facilities. These strategies were: 1) educate local jurisdictions and the public about DG technologies and their environmental impacts, and 2) prepare model ordinances for DG. He also requested that the Energy Commission provide projections on the number of DG facilities which could be proposed over the next five to 10 years. These projections would assist the city weigh the need to update its zoning ordinances.

Douglas Quetin of the Monterey Bay Unified Air Pollution Control District reiterated air districts' concerns about diesel-fueled engine exhaust and about cumulative air quality impacts from DG.

He pointed out a factual error in the Workshop Report regarding the CEQA statutory exemption for air permits. That CEQA exemption for air permits applies only to Title V (federal) air permits, which generally are not applicable to DG.

The Workshop Report's recommendation to expand the CEQA categorical exemption for cogeneration in existing facilities might be applicable to *clean* DG, but it should not be applied to diesel-fueled internal combustion engines. The most expeditious way to assure timely permitting of DG is through clean DG development. Other streamlining efforts could undermine California's commitment to clean air and interfere with air districts' siting authority.

Barry Wallerstein of the South Coast Air Quality Management District stated his district supports CEQA review and permit streamlining for clean DG technologies, but the district is concerned with and opposed to CEQA or permit exemptions for high polluting DG technologies such as diesel-fired internal combustion engines.

Appendix E — Local Government Planning & Community Development Survey

This survey solicits advice from local governments on What informational tools should be developed to support local agencies environmental review and land-use permitting of *small-scale* electric-generating facilities? These facilities, also called *distributed generation (DG)*, include solar photovoltaics, energy-storage batteries, fuel cells, natural-gas turbines, cogeneration systems, and diesel generators. Please complete and post this survey by August 11, 2000.

1. What is your local jurisdiction? _____
2. How is *distributed generation* defined in your jurisdiction s zoning ordinance or code?
 - i Public utility facilities
 - i Electric generating plants
 - i By *type* (e.g., photovoltaic, wind energy, co-generation, landfill gas recovery)
 - i Other: _____
 - i Not defined
3. Please place a within the matrix below, indicating where different types of DG equipment are *permitted uses* (i.e., allowed to be installed *without a use permit*). Please place a **P** within the same matrix, indicating where different types of DG equipment might be allowed *with a use permit*.

What type of DG is allowed where?	Solar Photovoltaics	Energy-Storage Batteries	Fuel Cells	Natural-Gas Fired Turbines or Cogeneration	Diesel Generator
Residential					
Commercial					
Agricultural					
Institutional					
Industrial					

4. Has your local agency received an application for a *use permit* to install a DG project?
 - Yes i No i
 - If yes, what environmental documents were prepared to support the use-permit decision?
 - i Notice of Exemption (Please indicate year and type of DG project: _____)
 - i Negative Declaration (Please indicate year and type of DG project: _____)
 - i Mitigated Negative Declaration (Please indicate year and type of DG project: _____)
 - i Environmental Impact Report (Please indicate year and type of DG project: _____)
5. Which of the following might help you conduct environmental reviews or issue use permits for DG?
 - i Appearance and operating information about the *specific* DG project being proposed
 - i Appearance and operating information about different *types* of DG projects
 - i A best practices list of suggested requirements (e.g., environmental mitigation measures) for different types of DG projects
 - i Assistance preparing a master or program EIR covering future DG installations in your region

i Other (Please specify:_____)

Appendix F — Local Government Building Official Survey

Your response to the following survey will help determine what informational tools should be developed to support plan checking and field inspections of ***small-scale*** electric-generating facilities. These facilities, also called ***distributed generation (DG)***, include solar photovoltaics, energy-storage batteries, fuel cells, natural-gas turbines, diesel generators, and cogeneration systems. Please complete and post this survey by August 11, 2000.

1. What is your local jurisdiction? ; City of _____ ; County of _____

2. Has your jurisdiction ever received an application for a building permit to install DG?

; Yes ; No

If yes, approximately how many and what types of permits have you issued for DG projects?

Which types of DG projects have received permits in your jurisdiction?

; Solar photovoltaics ; Cogeneration ; Diesel generator
; Other (Please list:_____)

3. Which of the following would help ***plan checkers*** to evaluate DG project plans?

; Model or standardized permit application package for types of DG projects
; Written guidelines about *which building codes apply* to types of DG projects
; Written guidelines about *how to interpret* building codes for types of DG projects
; Regional training on code applicability and interpretation for types of DG projects
; Other (Please specify:_____)

4. Has your local jurisdiction ever inspected a DG project?

; Yes ; No

If yes, approximately how many DG projects? _____

Which type(s) of DG have passed inspection in your jurisdiction?

; Solar photovoltaics ; Cogeneration ; Diesel generator
; Other (Please list:_____)

5. Which of the following would help ***building inspectors*** to evaluate DG projects?

; An inspection checklist for specific types of DG (Please specify:_____)
; Installation protocols for specific types of DG (Please specify:_____)

- ; References to specific types of DG installations (Please specify:_____)
- ; References to California field inspectors
- ; Regional training in how to inspect specific types of DG projects (Please specify:_____)

Appendix G — Local Government Survey Respondents

The following table identifies which California cities, counties and towns responded to the local government surveys.

LOCAL GOVERNMENT SURVEY RESPONDENTS

<u>Name of Jurisdiction</u>	<u>Building</u>	<u>Planning</u>	<u>Name of Jurisdiction</u>	<u>Building</u>	<u>Planning</u>
Cities					
Agoura Hills		<input checked="" type="checkbox"/>	Cloverdale	<input checked="" type="checkbox"/>	
Alameda		<input checked="" type="checkbox"/>	Coalinga		<input checked="" type="checkbox"/>
Antioch		<input checked="" type="checkbox"/>	Colton	<input checked="" type="checkbox"/>	
Arcadia		<input checked="" type="checkbox"/>	Concord	<input checked="" type="checkbox"/>	
Arcata	<input checked="" type="checkbox"/>		Corona	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Arvin	<input checked="" type="checkbox"/>		Coronado	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Atwater	<input checked="" type="checkbox"/>		El Cajon	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Barstow		<input checked="" type="checkbox"/>	El Centro	<input checked="" type="checkbox"/>	
Belmont	<input checked="" type="checkbox"/>		El Segundo		<input checked="" type="checkbox"/>
Bishop	<input checked="" type="checkbox"/>		Etno	<input checked="" type="checkbox"/>	
Brentwood	<input checked="" type="checkbox"/>		Fairfax	<input checked="" type="checkbox"/>	
Brisbane		<input checked="" type="checkbox"/>	Farmersville	<input checked="" type="checkbox"/>	
Calabasas		<input checked="" type="checkbox"/>	Folsom	<input checked="" type="checkbox"/>	
Calimesa		<input checked="" type="checkbox"/>	Fontana		<input checked="" type="checkbox"/>
Canyon Lake		<input checked="" type="checkbox"/>	Foster City	<input checked="" type="checkbox"/>	
Capitola		<input checked="" type="checkbox"/>	Fremont	<input checked="" type="checkbox"/>	
Carpinteria		<input checked="" type="checkbox"/>	Fresno		<input checked="" type="checkbox"/>
Cathedral City	<input checked="" type="checkbox"/>		Garden Grove	<input checked="" type="checkbox"/>	
Chico	<input checked="" type="checkbox"/>		Glendora	<input checked="" type="checkbox"/>	
Chino		<input checked="" type="checkbox"/>	Gonzales		<input checked="" type="checkbox"/>
Chula Vista	<input checked="" type="checkbox"/>		Grover Beach	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Claremont		<input checked="" type="checkbox"/>	Hanford	<input checked="" type="checkbox"/>	

<u>Name of Jurisdiction</u>	<u>Building</u>	<u>Planning</u>
Hawaiian Gardens	<input checked="" type="checkbox"/>	
Hayward		<input checked="" type="checkbox"/>
Hermosa Beach		<input checked="" type="checkbox"/>
Huntington Beach		<input checked="" type="checkbox"/>
Irvine		<input checked="" type="checkbox"/>
La Canada Flintridge	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
La Palma		<input checked="" type="checkbox"/>
La Quinta		<input checked="" type="checkbox"/>
La Verne		<input checked="" type="checkbox"/>
Laguna Beach		<input checked="" type="checkbox"/>
Laguna Hills	<input checked="" type="checkbox"/>	
Lancaster	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lathrop	<input checked="" type="checkbox"/>	
Long Beach		<input checked="" type="checkbox"/>
Los Angeles	<input checked="" type="checkbox"/>	
Lynnwood		<input checked="" type="checkbox"/>
Madera	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Manhattan Beach	<input checked="" type="checkbox"/>	
Merced	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mission Viejo		<input checked="" type="checkbox"/>
Modesto		<input checked="" type="checkbox"/>
Monrovia	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monterey Park	<input checked="" type="checkbox"/>	
Mountain View		<input checked="" type="checkbox"/>
Norwalk	<input checked="" type="checkbox"/>	
Novato	<input checked="" type="checkbox"/>	

<u>Name of Jurisdiction</u>	<u>Building</u>	<u>Planning</u>
Ontario		<input checked="" type="checkbox"/>
Orange		<input checked="" type="checkbox"/>
Oroville	<input checked="" type="checkbox"/>	
Pacific Grove		<input checked="" type="checkbox"/>
Palm Desert	<input checked="" type="checkbox"/>	
Palm Springs	<input checked="" type="checkbox"/>	
Paso Robles		<input checked="" type="checkbox"/>
Perris	<input checked="" type="checkbox"/>	
Pico Rivera	<input checked="" type="checkbox"/>	
Pinole	<input checked="" type="checkbox"/>	
Pismo Beach	<input checked="" type="checkbox"/>	
Pittsburg	<input checked="" type="checkbox"/>	
Placentia		<input checked="" type="checkbox"/>
Placerville		<input checked="" type="checkbox"/>
Pleasanton		<input checked="" type="checkbox"/>
Port Hueneme		<input checked="" type="checkbox"/>
Redding		<input checked="" type="checkbox"/>
Redlands	<input checked="" type="checkbox"/>	
Rio Vista		<input checked="" type="checkbox"/>
Ripon	<input checked="" type="checkbox"/>	
Riverside		<input checked="" type="checkbox"/>
Rohnert Park	<input checked="" type="checkbox"/>	
Rosemead		<input checked="" type="checkbox"/>
Roseville	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Salinas	<input checked="" type="checkbox"/>	
San Bernardino	<input checked="" type="checkbox"/>	

<u>Name of Jurisdiction</u>	<u>Building</u>	<u>Planning</u>
San Bruno	<input checked="" type="checkbox"/>	
San Ramon		<input checked="" type="checkbox"/>
Santa Barbara	<input checked="" type="checkbox"/>	
Santa Clara	<input checked="" type="checkbox"/>	
Santa Fe Springs	<input checked="" type="checkbox"/>	
Sausalito		<input checked="" type="checkbox"/>
Scotts Valley	<input checked="" type="checkbox"/>	
Seal Beach		<input checked="" type="checkbox"/>
Seaside	<input checked="" type="checkbox"/>	
Solano Beach		<input checked="" type="checkbox"/>
South Lake Tahoe		<input checked="" type="checkbox"/>
Susanville		<input checked="" type="checkbox"/>
Temecula	<input checked="" type="checkbox"/>	
Temple City		<input checked="" type="checkbox"/>
Ventura	<input checked="" type="checkbox"/>	
Walnut Creek	<input checked="" type="checkbox"/>	
Wasco	<input checked="" type="checkbox"/>	
Watsonville	<input checked="" type="checkbox"/>	
Weed	<input checked="" type="checkbox"/>	
West Covina	<input checked="" type="checkbox"/>	
West Hollywood	<input checked="" type="checkbox"/>	
West Sacramento	<input checked="" type="checkbox"/>	
Winters	<input checked="" type="checkbox"/>	
Yreka	<input checked="" type="checkbox"/>	
Yucaipa		<input checked="" type="checkbox"/>

<u>Name of Jurisdiction</u>	<u>Building</u>	<u>Planning</u>
Counties		
Alameda	<input checked="" type="checkbox"/>	
Alpine		<input checked="" type="checkbox"/>
El Dorado	<input checked="" type="checkbox"/>	
Glenn	<input checked="" type="checkbox"/>	
Humboldt	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Imperial	<input checked="" type="checkbox"/>	
Los Angeles		<input checked="" type="checkbox"/>
Marin		<input checked="" type="checkbox"/>
Mariposa		<input checked="" type="checkbox"/>
Nevada		<input checked="" type="checkbox"/>
Orange	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
San Bernardino		<input checked="" type="checkbox"/>
San Diego	<input checked="" type="checkbox"/>	
San Luis Obispo	<input checked="" type="checkbox"/>	
Shasta	<input checked="" type="checkbox"/>	
Siskiyou	<input checked="" type="checkbox"/>	
Sonoma	<input checked="" type="checkbox"/>	
Tehama	<input checked="" type="checkbox"/>	
Towns		
Colma		<input checked="" type="checkbox"/>
Mammoth Lakes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Paradise		<input checked="" type="checkbox"/>
Yountville		<input checked="" type="checkbox"/>